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# A COLLECTIVE INDEX

OF THE

# TRANSACTIONS, PROCEEDINGS AND ABSTRACTS

OF

# THE CHEMICAL SOCIETY

## 1903—1912

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## PART II—INDEX OF SUBJECTS

J—Z

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# ABBREVIATIONS.

T. =Transactions.
P. =Proceedings.
A., i. =Abstracts, vol. I.
A., ii. =Abstracts, vol. II.

*o* =ortho.
*m* =meta.
*p* =para.
*n* =normal.*
*prim.* =primary.
*sec.* =secondary.
*tert.* =tertiary.
*vic.* =vicinal.
*ψ* =pseudo.

*d* =dextro.
*l* =lævo.
*i* =inactive.
*r* =racemic.
*s* =symmetrical.
*as* =unsymmetrical.
b.p. =boiling point.
m.p. =melting point.
*N* =attached to nitrogen.
*O* =attached to oxygen.
*C* =attached to carbon.
*S* =attached to sulphur.
*ar.* =aromatic.
*ac.* =alicyclic.

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* Except in the term, *n*-rays.

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**Ketocarboxylic acids,** cyclic esters, syntheses with (Kötz and Hesse), 1906, A., i, 88; (Kötz and Michels), 1906, A., i, 666; 1907, A., i, 58; (Kötz and Kayser), 1906, A., i, 667; (Kötz, Bieber, and Schüler), 1906, A., i, 668; (Kötz and Schüler), 1907, A., i, 58; (Kötz, Bieber, Harzer, Kayser, and Schüler), 1907, A., i, 59.

**4-Keto-3-*o*-carboxyphenyl-2-methylquinazoline.** See 3-*o*-Carboxyphenyl-2-methyl-4-quinazolone.

**4-Keto-2-*o*-carboxyphenylquinazoline.** See 2-*o*-Carboxyphenyl-4-quinazolone.

**Ketochlorides,** aromatic, action of metals on (Norris, Thomas, and Brown), 1911, A., i, 31.

**α-Keto-β-*m*-chloroanilino-αβ-diphenylethane** and its β-benzoyl derivative (Bailey and McCombie), 1912, T., 2276; P., 266.

**4-Keto-2-*di*chloromethyldihydroquinazoline.** See 2-Methyldihydro-4-quinazolone, ω-*di*chloro-.

**2-Keto-1:2′-coumarancoumarone** and its hydrobromide (Fries and Pfaffendorf), 1911, A., i, 149.

**Ketocoumaryl-β-naphthafuran** (Stoermer and Schäffer), 1903, A., i, 847.

**η-Ketodecoic acid** (Blaise and Kœhler), 1909, A., i, 204.
  metallic salts and derivatives of (Blaise and Kœhler), 1910, A., i, 298.

**1-Keto-2:4-diacetyl-5-methyl-3-*p*-hydroxy-*m*-methoxyphenyl-1:2:3:4-tetrahydrobenzene.** See 4:6-Diacetyl-5-*p*-hydroxy-*m*-methoxyphenyl-3-methyl-$\Delta^2$-*cyclo*hexenone.

**4-Keto-2:3-dialkyldihydroquinazolines.** See 2:3-Dialkyldihydroquinazolones.

**3-Keto-2:5-di*iso*butyltetrahydrofuran** (Dupont), 1911, A., i, 805.

**2-Keto-$\Delta^{1:2'}$-dicoumaran** and its derivatives (Fries and Pfaffendorf), 1911, A., i, 150.

**β-Keto-δδ-diethoxy-ααγγ-tetramethylvaleric acid,** ethyl ester (Shdanovitsch), 1911, A., i, 10.

**4-Keto-3:5-diethylpenthiophen-2:6-dithiol** (Apitzsch), 1905, A., i, 811.

**α-Ketodihydroanethole,** *di*bromo- and *di*bromonitro- (Hoering), 1905, A., i, 902.

**α-Ketodihydro*iso*apiole,** bromo- (Pond and Siegfried), 1903, A., i, 417.

**Ketodihydro-1:4-benzothiazine,** condensation product of (Aktien Gesellschaft für Anilin-Fabrikation), 1912, A., i, 504.

**2-Keto-3:4-dihydro-1:4-benzothiazine** (Friedländer and Laske), 1907, A., i, 335.

**3-Keto-3:4-dihydro-1:4-benzothiazines,** formation of (Friedländer and Chwala), 1907, A., i, 525.

**1-Ketodihydrobenzoxazine.** See Dihydrobenzoxazine-1-one.

**1-Keto-1:2-dihydrobenzoxazole** and the action of aniline on (Young and Dunstan), 1908, T., 1056.

**1-Keto-1:2-dihydrobenzoxazole,** 4-chloro- (*carbonyl-4-chloro-2-aminophenol*) (Upson), 1904, A., i, 735.

**Ketodihydro-β-camphylic acid,** *di*hydroxy- (Perkin), 1903, T., 845.

**Ketodihydrochaulmoogric acid,** hydroxy-, and its methyl ester and its semicarbazone (Barrowcliff and Power), 1907, T., 567; P., 70.

**Ketodihydrodi*cyclo*pentadiene,** oximes of (Wieland), 1906, A., i, 418.

**5-Keto-2:5-dihydrofurfurylidene-4-acetic acid,** 2-hydroxy- (Bland and Thorpe), 1912, T., 1494; P., 195.

**Ketodihydro*cyclo*geranic acids.** See Dihydro*iso*phoronecarboxylic acids.

**Ketodihydromethylmorphimethine** (*hydroxymethylmorphimethine*) and its derivatives (Knorr and Schneider), 1906, A., i, 449; (Pschorr and Einbeck), 1907, A., i, 547; (Knorr and Hörlein), 1907, A., i, 548.

**2-Ketodihydronaphthalene,** 1-bromo-1-nitro- (Fries and Roth), 1912, A., i, 656.

**6-Keto-1:5-dihydropyridazine-5-carboxylic acid,** 4-imino-, ethyl ester, and its phenylhydrazone (Baron, Remfry, and Thorpe), 1904, T., 1738.

**2-Ketodihydro*iso*pyrrolyl-5-cyanoacetic acid** (Best and Thorpe), 1909, T., 1533.

**4-Keto-3:4-dihydro-β-quinacridine.** See β-Quinacridine, 4-hydroxy-.

**Ketodihydroquinazoline.** See Dihydroquinazolone.

**2-Ketodihydro-1-thionaphthen** (Marschalk), 1912, A., i, 576.

**2-Ketodihydrothionaphthen,** 1:1-*di*bromo- (Bezdzik, Friedländer, and Koeniger), 1908, A., i, 200.

**3-Ketodihydro-(1)-thionaphthen,** and 2-chloro-, 2-bromo-, 2:2-*di*chloro-, 2:2-*di*bromo-, and 5-chloro-2:2-*di*bromo- (Badische Anilin- & Soda-Fabrik), 1909, A., i, 950.

**3-Ketodihydro-(1)-thionaphthens,** 2-imino-, preparation of *p*-hydroxyaryl derivatives of (Kalle & Co.), 1912, A., i, 382.

**Ketodihydrotoluene.** See Methyl*cyclo*hexadienone.

**3-Keto-2:5-di-*p*-methoxydiphenyl-3:4-dihydro-1:4-diazine** and its hydrochloride and picrate (McCombie and Parry), 1909, T., 588; P., 95.

**1-Keto-6:7-dimethoxy-2-ethyl-, -methyl-, and -propyl-tetrahydro*iso*quinoline.** See 6:7-Dimethoxy-2-ethyl-, -methyl-, and -propyl-tetrahydro*iso*quinolone.

**3-Keto-2-*p*-dimethylaminoanilcoumaran** (Fries and Hasselbach), 1911, A., i, 151.

**5-Keto-4-dimethylamino-1:2:2:4-tetramethylpyrrolidine.** See 4-Dimethylamino-1:2:2:4-tetramethyl-5-pyrrolidone.

**5-Keto-4-dimethylamino-2:2:4-trimethyltetrahydrofuran** and its additive salts (Kohn), 1908, A., i, 819.

**γ-Keto-αβ-dimethylbutyl alcohol** and its semicarbazone and corresponding glycol (Salkind), 1905, A., i, 732.

**2-Keto-5:5′-dimethyl-$\Delta^{1:2'}$-dicoumaran** and its derivatives (Fries and Pfaffendorf), 1911, A., i, 150.

**3-Keto-2:5-dimethyl-2:5-diethyltetrahydrofuran** and its semicarbazone (Dupont), 1911, A., i, 805.

**5-Keto-4:7-dimethyl-4:5-dihydro-1:2:3-benzotriazole,** 4-chloro-, 4-hydroxy-, and 4-nitro- (Fries and Noll), 1912, A., i, 660.

**3-Keto-2:2-dimethyl-2:3-dihydropyrrole-5-*o*-benzoic acid,** and its salts and 4-bromo-, 4-nitro-, 4-nitroso-, and 1:4-*di*nitroso-, and their derivatives (Gabriel), 1911, A., i, 227.

**Ketodimethyl-hexahydrobenzene, -*cyclo*hexane** and **-*cyclo*hexene.** See Dimethyl*cyclo*hexanone and -*cyclo*hexenone.

**ε-Keto-αα-dimethylhexoic acid** and its semicarbazone (Masson), 1912, A., i, 280.

**β-Keto-γγ-dimethylhexoic acid** (Braun and Kittel), 1907, A., i, 17.

**ζ-Keto-γη-dimethyloctaldehyde** (Semmler), 1907, A., i, 715.

**3-Keto-2:2-dimethylpentamethylene-1-carboxylic acid.** See 2:2-Dimethyl*cyclo*pentanone-3-carboxylic acid.

**4-Keto-3:5-dimethylpenthiophen-2:6-disulphonic acid,** sodium salt (Apitzsch and Bauer), 1909, A., i, 48.

**4-Keto-3:5-dimethylpenthiophen-2:6-dithiol** and its ethers and diacyl esters (Apitzsch), 1905, A., i, 810.

**3-Keto-1:1-dimethyl-$\Delta^4$-tetrahydrobenzene.** See 1:1-Dimethyl-$\Delta^4$-*cyclo*hexen-3-one.

**5-Keto-4:7-dimethyl-4:5:6:7-tetrahydro-1:2:3-benzotriazole,** 4:6:6:7-*tetra*chloro- (Fries and Noll), 1912, A., i, 660.

**3-Keto-2:5-dimethyltetrahydrofuran** and its derivatives (Dupont), 1911, A., i, 805.

**Ketodimethyltetrahydroglyoxaline.** See Dimethyltetrahydroglyoxalone.

**Keto-4:6-dimethylthionaphthen** and its **-carboxylic acid** (Kalle & Co.), 1912, A., i, 126.

**Ketodiol,** $C_{16}H_{14}O_3$, from the hydrolysis of acetoxydiphenacyl (Paal and Schulze), 1903, A., i, 709.

**3-Keto-2:5-dipentamethylenetetrahydrofuran** and its semicarbazone (Dupont), 1911, A., i, 805.

**δ-Keto-αδ-di*cyclo*pentylvaleric acid** and its semicarbazone (Wallach and Ost), 1912, A., i, 569.

**5-Keto-3:3′-diphenyl-$\Delta^{1(1'):3:2'}$-bis*cyclo*pentenylidene** and its hydrochloride (Borsche and Menz), 1908, A., i, 148.

**2-Keto-3:3-diphenyl-5-*tert.*-butyl-2:3-dihydropyrrole** and its 1-methyl derivative (Japp and Maitland), 1904, T., 1502.

**α-Keto-βγ-diphenylbutyric acid,** γ-hydroxy-, and its sodium salt, oxime, phenylhydrazone, and lactone (Erlenmeyer), 1905, A., i, 784.

**3-Keto-2:5-diphenyl-3:4-dihydro-1:4-diazine** (Japp and Knox), 1905, T., 702; P., 153.

**5-Keto-2:3-diphenyl-2:5-dihydrofuran** (*diphenyl-$\Delta^1$-crotolactone*) (Japp and Michie), 1903, T., 283.

**5-Keto-2:3-diphenyl-2:5-dihydrofuran-2-acetic acid** and its ethyl ester (Beschke, Winograd-Finkel, and Köhres), 1911, A., i, 874.
  and α-bromo-, and its ethyl ester (Beschke, Köhres, and Stoll), 1912, A., i, 889.

**5-Keto-2:3-diphenyl-2:5-dihydrofuran-2-iodoacetic acid** (Beschke, Winograd-Finkel, and Köhres), 1911, A., i, 874.

**5-Keto-2:3-diphenyl-4-dimethyl-4:5-dihydrofuran**(2:3-*diphenyl*-1:1-*dimethyl*-$\Delta^2$-*crotolactone*) (JAPP and MICHIE), 1903, T., 308.
**2-Keto-4:5-diphenylene-2:3-dihydrofuran** (RICHARDS), 1910, T., 1458; P., 195.
**Keto-3:4-diphenyl-$\Delta^2$-*cyclo*hexene.** See 3:4-Diphenyl-$\Delta^2$-*cyclo*hexenone.
**5-Keto-2:3-diphenyl-4-methyl-2:5-dihydrofuran** (JAPP and MICHIE), 1903, T., 280; P., 21.
**Ketodiphenyloctolactonic acid** and its stereoisomeride, and their salts (FITTIG and STADLMAYR), 1904, A., i, 969.
**Ketodiphenyloctonic acid** and its salts (FITTIG and HADORFF), 1904, A., i, 969.
**4-Keto-3:5-diphenylpenthiophen-2:6-disulphonic acid** and its esters and salts (APITZSCH and BAUER), 1909, A., i, 48.
**4-Keto-3:5-diphenylpenthiophen-2:6-dithiol**(4-*keto*-2:6-*diphenyl*-4-*thiophen*-3:5-*dithiol*) (APITZSCH), 1905, A., i, 810.
  and its sulphide (APITZSCH and BAUER), 1909, A., i, 47.
**4-Keto-3:5-diphenylpenthiophen-2:6-dithiophenylurethane** (APITZSCH and BAUER), 1909, A., i, 48.
**4-Keto-1:3-diphenylpyrazolone** and its oxime, semicarbazone, and other derivatives (SACHS and BECHERESCU), 1903, A., i, 529.
**2-Keto-4:5-diphenylpyrroline,** 3-benzoylamino-3-hydroxy- (RUHEMANN), 1910, T., 463.
**5-Keto-2:3-diphenyltetrahydrofuran-2-acetic acid,** 3-hydroxy- and its ethyl ester (BESCHKE, WINOGRAD-FINKEL, and KÖHRES), 1911, A., i, 873.
  and its ethyl ester and β-bromo- (BESCHKE, KÖHRES, and STOLL), 1912, A., i, 890.
**Ketodiphenyltetrahydroglyoxaline.** See Diphenyltetrahydroglyoxalone.
**2-Keto-1:5-diphenyl-1:2:3:6-tetrahydro-1:3:4-triazine** (BUSCH and HEFELE), 1911, A., i, 583.
**1-Keto-2:6-diphenyl-4-thiophen-3:5-dithiol** and its ethers, salts, and anhydride (APITZSCH and METZGER), 1904, A., i, 510.
**3-Keto-2:5-distyryl-3:4-dihydro-1:4-diazine** and its hydrochloride and tetrabromide (MCCOMBIE and PARRY), 1909, T., 589; P., 95.
**4-Keto-2:6-dithiolacetonylpenthiophen-3:5-dicarboxylic acid,** ethyl ester (APITZSCH and KELBER), 1910, A., i, 410.
**1:3-Keto-enolic ethers,** preparation of (ABELL), 1912, T., 989; P., 145.
**Ketoethanetricarboxylic acid** and its ethyl ester, and calcium salt (KURREIN), 1905, A., i, 413.
**6-Keto-2-ethoxy-4-benzenesulphonylpiperazine** (JOHNSON and MCCOLLUM), 1906, A., i, 157.
**4-Keto-5-ethoxy-3-ethylhydro*apo*camphoric acid,** methyl ester (KOMPPA and ROUTALA), 1911, A., i, 382.
**5-Keto-3-ethoxy-1-phenyl-4:5-dihydrotriazole,** and its 4-methyl derivative (ACREE), 1903, A., i, 867.
**Ketoethoxyphenylnaphthatriazine** (BUSCH and BERGMANN), 1905, A., i, 310.
**α-Keto-β-ethylheptolactone-γ-carboxylic acid** and its hydrolysis (FICHTER and KAPPELER), 1908, A., i, 660.
**Ketoethyltetrahydro*iso*quinoline.** See Ethyltetrahydro*iso*quinolone.
**3-Keto-6-ethylthiol-(1)-thionaphthen** and its nitroso-derivative (KALLE & Co.), 1911, A., i, 666.
**3-Keto-6-ethylthiol-(1)-thionaphthen-2-carboxylic acid** (KALLE & Co.), 1911, A., i, 667.
**α-Keto-fatty acids,** esters, and their semicarbazones (LOCQUIN), 1905, A., i, 11.
**α-Keto-β-formylanilino-αβ-diphenylethane** (EVEREST and MCCOMBIE), 1911, T., 1750.
**4-Keto-α- and β-*cyclo*geraniolanecarboxylic acids,** and their ethyl esters and their oximes and benzylidene derivatives (MERLING, WELDE, EICHWEDE, and SKITA), 1909, A., i, 482.
**α-Ketoglutaric acid** (BLAISE and GAULT), 1908, A., i, 713.
  ethyl ester and derivatives of (BLAISE and GAULT), 1911, A., i, 520.
  diethyl ester and phenylhydrazone of (WISLICENUS and WALDMÜLLER), 1911, A., i, 603.
**α-Ketoglutaric acid,** *βδ-di*cyano-, ethyl ester (MICHAEL), 1903, A., i, 736.
**δ-Ketoheptane-αη-dicarboxylic acid,** γ-*iso*nitroso- (v. PECHMANN and SIDGWICK), 1904, A., i, 972.
**Ketoheptane-αγεη-tetracarboxylic acid,** ethyl ester (v. PECHMANN and SIDGWICK), 1904, A., i, 971.
**ε-Ketoheptoic acid,** its ethyl ester and their semicarbazones (BLAISE and KŒHLER), 1910, A., i, 298.
**Ketohexahydrobenzoic acids.** See *cyclo*-Hexanonecarboxylic acids.

**α-Ketohexahydrobenzylidene-*m*-aminophenol** (Borsche, Schmidt, Tiedtke, and Rottsieper), 1910, A., i, 881.

**α-Ketohexahydrobenzylideneaniline** (Borsche, Schmidt, Tiedtke, and Rottsieper), 1910, A., i, 881.

**α-Ketohexahydrobenzylideneaniline-*p*-sulphonic acid** and its salts (Borsche, Schmidt, Tiedtke, and Rottsieper), 1910, A., i, 881.

**γ-Keto-ααββδδ-hexamethyladipic acid,** ethyl ester (Shdanovitsch), 1911, A., i, 10.

**Keto*cyclo*hexene.** See *cyclo*Hexenone.

**γ-Ketohexoic acid,** ε-nitro-, and its methyl ester, semicarbazone, and transformation products (Thiele and Landers), 1909, A., i, 876.

**Ketohydrazines,** reduction of (Darapsky), 1903, A., i, 367.

**Ketohydrindene.** See Hydrindone.

**Ketohydrindenophenazine** (Ruhemann), 1910, T., 1449.

**Ketohydrindylmethyleneketohydrindene** and its methylenedioxy-derivative (Ruhemann and Levy), 1912, T., 2549.

**Ketohydropyridines.** See Hydropyridones.

**6-Keto-11-hydroxyphenyl-6:11-*di*hydronaphthacene,** 5:12-*di*hydroxy-, and its triacetate and acetyl derivative (Voswinckel and de Weerth), 1910, A., i, 50.

**Ketoindene-.** See Indone-.

**1-Keto-2-indoxylanthracene,** and 5- and 8-hydroxy- (Bezdzik and Friedländer), 1910, A., i, 190.

**2-Keto-1-indoxylanthracene** (Bezdzik and Friedländer), 1910, A., i, 190.

**10-Keto-9-indoxylanthracene** (Friedländer), 1909, A., i, 417.

**1-Keto-2-indoxyl-1:2-dihydronaphthalene,** 4- and 5-amino-, acetyl derivatives and 5-hydroxy- (Bezdzik and Friedländer), 1909, A., i, 416.

**4-Keto-1-indoxyl-1:4-dihydronaphthalene,** 3-hydroxy- (Bezdzik and Friedländer), 1909, A., i, 415; (Friedländer), 1909, A., i, 417.

**5-Keto-4(2′)-indoxyl-1-phenyl-3-methylpyrazole** (Felix and Friedländer), 1910, A., i, 279.

**Keto-ketens** and their reactions (Staudinger and Klever), 1908, A., i, 318; (Staudinger), 1908, A., i, 410, 411.

**Ketols.** See Keto-alcohols.

**Keto-lactones,** unsaturated, formation of, from αβ-diacylcarboxylic esters (Borsche and Fels), 1906, A., i, 508.

**Keto-lactonic acid,** $C_8H_9O_5Cl$, methyl and ethyl esters, and their semicarbazones from epichlorohydrin and the sodium derivative of acetonedicarboxylic esters (Haller and March), 1903, A., i, 319, 714.

**4-Keto-5-methoxydehydrocamphoric acid,** methyl ester (Komppa), 1910, A., i, 51.

**2-Keto-8(5)-methoxy-6:7-methylenedioxy-1:2-dihydroquinoline.** See 8(5)-Methoxy-6:7-methylenedioxy-1:2-dihydro-2-quinolone.

**2-Keto-8(5)-methoxy-6:7-methylenedioxy-1-methyl-1:2-dihydroquinoline.** See 8(5)-Methoxy-6:7-methylenedioxy-1-methyl-1:2-dihydro-2-quinolone.

**2-Keto-8(5)-methoxy-6:7-methylenedioxy-1-methyl-1:2:3:4-tetrahydroquinoline.** See Oxy*iso*cotarnine.

**1-Keto-6(7)-methoxy-2-methyltetrahydro*iso*quinoline.** See 6(7)-Methoxy-2-methyltetrahydro*iso*quinolone.

**5-Keto-3-methoxy-1-phenyl-4:5-dihydrotriazole** and its 4-methyl derivative (Acree), 1903, A., i, 867.

**3-Keto-5- and -6-methoxy-(1)-thionaphthen** (Kalle & Co.), 1911, A., i, 666.

**3-Keto-5- and -6-methoxy-(1)-thionaphthen-2-carboxylic acid** and their nitroso-derivatives (Kalle & Co.), 1911, A., i, 666.

**Ketomethylamino-di- and -tetra-methylpyrolidines.** See Methylamino-di- and -tetra-methylpyrrolidones.

**5-Keto-4-methylamino-2:2:4-trimethyltetrahydrofuran,** and its ethanol derivative and methiodide and aurichloride (Kohn), 1909, A., i, 599.
  and its phenylthiocarbamide (Kohn), 1908, A., i, 819.

**2-Keto-1-methyl-1-*di*chloromethyldihydrobenzene.** See 1-Methyl-1-*di*chloromethyl*cyclo*hexen-2-one.

**4-Keto-1-methyl-1-*tri*chloromethyldihydrobenzene.** See 1-Methyl-1-*tri*chloromethyl*cyclo*hexen-4-one.

**1-Keto-4-methyl-1:2-dihydrobenzoxazole** (*carbonyl-3-amino-*p*-cresol*) (Upson), 1904, A., i, 735.

**2-Keto-1-methyldihydronaphthalene,** chloro-derivatives (Fries and Hempelmann), 1908, A., i, 730.

**Ketomethyldihydronaphthaquinoxaline.** See Methyldihydronaphthaquinoxalone.

**Ketomethyldihydropyridinecarboxylic acid.** See Methyldihydropyridonecarboxylic acid.

**Ketomethyldihydroquinazoline.** See Methyldihydroquinazolone.

**Ketomethyldihydroquinoxaline.** See Methyldihydroquinoxalone.

**3-Keto-5-methyldihydro-(1)-thionaphthen,** 2:2-*di*bromo- (Badische Anilin- & Soda-Fabrik), 1909, A., i, 950.

**2-Keto-1-methyldihydrothionaphthen-1-carboxylic acid,** methyl ester (Auwers), 1912, A., i, 1011.

**1-Keto-5:6-methylenedioxyhydrindenophenazine** (Ruhemann), 1912, T., 785.

**1:2-Ketomethyleneperimidine** (Sachs), 1909, A., i, 429.

**γ-Keto-α-methylglutaric acid** and its ethyl ester and their derivatives (Blaise and Gault), 1911, A., i, 520.

**1-Keto-5-methyl-3-*p*-hydroxy-*m*-methoxyphenyl-1:2:3:4-tetrahydrobenzene-2:4-dicarboxylic acid.** See 5-*m*-Methoxyphenyl-3-methyl-$\Delta^2$-*cyclo*hexenone-4:6-dicarboxylic acid, *p*-hydroxy-.

**2-Keto-3-methylimino-5-phenylpyrroline** hydrochloride and picrate (Mumm and Münchmeyer), 1911, A., i, 80.

**γ-Keto-β-methyl-*n*-pentadecane-αμ-dicarboxylic acid** and its methyl ester and oxime (Barrowcliff and Power), 1907, T., 575; P., 70.

**Ketomethyl*cyclo*pentanecarboxylic acids.** See Methyl*cyclo*pentanonecarboxylic acids.

**4-Keto-3-methylpenthiophen-2:6-disulphonic acid,** sodium salt (Apitzsch and Bauer), 1909, A., i, 48.

**4-Keto-3-methylpenthiophen-2:3-dithiol** and its dimethyl ether and diacetyl ester (Apitzsch), 1905, A., i, 810.

**Ketomethylquinazolines.** See Methylquinazolones.

**4-Keto-7-methyltetrahydrohexathiazole-5-carboxylic acid,** 2-amino-, ethyl ester (Johnson and Hill), 1911, A., i, 502.

**2-Keto-1-methyltetrahydronaphthalene,** chloro-derivatives (Fries and Hempelmann), 1908, A., i, 730.

**2-Keto-1-methyltetrahydropyrrolidene-5-cyanoacetic acid,** ethyl ester (Best and Thorpe), 1909, T., 1535.

**Ketomethyltetrahydro*iso*quinoline.** See Methyltetrahydro*iso*quinolone.

**5-Keto-3-methylthiol-1-phenyl-4:5-dihydrotriazole,** and its 4-methyl derivative (Acree), 1903, A., i, 867.

**3-Keto-5-methylthiol-(1)-thionaphthen** and its nitroso-derivative (Kalle & Co.), 1911, A., i, 667.

**3-Keto-6-methylthiol-(1)-thionaphthen** (Kalle & Co.), 1912, A., i, 126.

**3-Keto-5-methylthiol-(1)-thionaphthen-2-carboxylic acid** (Kalle & Co.), 1911, A., i, 667.

**3-Keto-6-methylthiol-(1)-thionaphthen-2-carboxylic acid** (Kalle & Co.), 1912, A., i, 126.

**Keto-4-methylthionaphthen** (Auwers and Arndt), 1909, A., i, 176.

**3-Keto-5-methyl-(1)-thionaphthen** (Badische Anilin- & Soda-Fabrik), 1909, A., i, 950.

**α-Keto-β-methylvaleric acid,** β-cyano-, ethyl ester (Wislicenus and Silberstein), 1910, A., i, 539.

**δ-Keto-β-methylvaleronitrile** and its amide (Wohl and Maag), 1911, A., i, 25.

**5-Keto-3-methyl-4-vanillylidene-4:5-dihydro*iso*oxazole** (Knoevenagel and Albert), 1905, A., i, 63.

**Ketonaphthathiophencarboxylic acid** (Kalle & Co.), 1912, A., i, 208.

**Keto*peri*naphthindene,** hydroxy-, and its derivatives (Errera and Cuffaro), 1912, A., i, 273.
and its ethyl and methyl ethers (Errera), 1911, A., i, 466.

**Keto*peri*naphthindenilphenylmethane,** *di*hydroxy-, and its sodium salt (Errera and Cuffaro), 1912, A., i, 273.

**4-Keto-3-β-naphthyltetrahydrothiazole,** 2-acetylimino-, and its isomeride (Johnson), 1903, A., i, 580.

**Ketone** formation, relation of muscular work to (Preti), 1911, A., ii, 628.
and its semicarbazone from the oxidation of camphene (Wagner, Moycho, and Zienkowski), 1904, A., i, 438.
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$C_6H_8O_2N_2$, and its semicarbazone, from the trioxime from 3-nitroso-2:5-dimethylpyrrole (Morelli and Marchetti), 1908, A., i, 363.

**Ketone**, $C_7H_{10}O$, and its oxime, benzoyloxime, and semicarbazone, from $\Delta^1$-cyclohexeneacetic acid (Wallach), 1908, A., i, 426.

$C_7H_{10}O$, and its semicarbazone from distillation of calcium cis-cyclohexenedicarboxylate (Stark), 1912, A., i, 868.

$C_7H_{14}O$, and its semicarbazone, from the oxidation of β-methyl-α-ethylbutyl alcohol (Fourneau and Tiffeneau), 1907, A., i, 818.

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$C_8H_{12}O$, and its oxime, from the condensation of tiglic acid with acetone (Dautwitz), 1906, A., i, 803.

$C_8H_{14}O$, from the action of calcium carbide on butanone (Bodroux and Taboury), 1908, A., i, 854.

$C_8H_{14}O$, and its carbazone, from the dehydration of oxoctenol (Prileschaeff), 1904, A., i, 795.

$C_8H_{14}O$, and its *p*-nitrophenylhydrazone, from the reduction of the polymeride of diacetyl (Diels and Jost), 1903, A., i, 427.

$C_8H_{14}O_2$, from *d*-laurolene, and its semicarbazone (Noyes and Derick), 1910, A., i, 754.

$C_9H_{12}O$, and its semicarbazone, from limonene (Henderson), 1907, T., 1875; P., 247.

$C_9H_{12}O$, from oxidation of terpinene, and its semicarbazone (Henderson and Cameron), 1909, T., 974; P., 151.

$C_9H_{12}O$, and its semicarbazone and hydroxymethylene compound, from the diketone, $C_9H_{14}O_2$, from santene (Semmler and Bartelt), 1908, A., i, 38.

$C_9H_{14}O$, and its oxime and semicarbazone, from 1-methyl-dicyclo-2:2:2-octan-7-ol (Semmler and Bartelt), 1908, A., i, 38.

$C_9H_{14}O$, and its semicarbazone, from the oxidation of the acid, $C_{10}H_{16}O_3$ (Wallach), 1907, A., i, 1059.

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$C_9H_{14}O$, and its semicarbazone, from the oil of the wood of atlas cedar (Grimal), 1903, A., i, 46.

$C_9H_{14}O$, from oxime of nitrosochloride of hydrocarbon, $C_9H_{16}$, from fenchelylamine hydrochloride, and its semicarbazone (Wallach and Ritter), 1909, A., i, 812.

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$C_9H_{16}O$, from $\Delta^\delta$-heptylene and acetyl chloride and its semicarbazone (Krapiwin), 1910, A., i, 349.

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$C_{10}H_{10}O_3$ and $C_{10}H_{12}O_2$, from isosafrole oxide and anethole oxide (Hoering), 1906, A., i, 951.

$C_{10}H_{12}O_2$, and its oxime and semicarbazone, from β-nitroanethole (Wallach and Müller), 1904, A., i, 753.

$C_{10}H_{14}O$, and its oxime and semicarbazone, from the oxidation of pinene (Henderson, Gray, and Smith), 1903, T., 1304; P., 196.

$C_{10}H_{16}O$, from the action of light on camphor, and its semicarbazone (Ciamician and Silber), 1910, A., i., 496.

$C_{10}H_{16}O$, and its semicarbazone, from the alcohol, $C_{10}H_{18}O$, from β-pinene (Wallach), 1907, A., i, 1059.

$C_{10}H_{16}O$ (two), and their semicarbazones from pinolene and isopinolene (Aschan), 1907, A., i, 630.

$C_{10}H_{16}O$, and its semicarbazone, from umbellulone (Lees), 1904, T., 643; P., 89.

$C_{10}H_{16}O_2$, from α-terpineol, and its semicarbazone (Cusmano and Linari), 1912, A., i, 272.

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$C_{10}H_{20}O$, from action of magnesium tert.-butylchloride on ethyl oxalate (Egorova), 1910, A., i, 91.

$C_{10}H_9O_2Br$, from 3:5-dibromo-4-methoxy-1-β-bromopropylenebenzene (Hoering), 1904, A., i, 578.

$C_{10}H_{11}O_3Br$, and its acyl derivatives, from 3-bromo-4-methoxy-1-β-bromopropionylbenzene (Hoering), 1904, A., i, 577.

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  $C_{11}H_{10}O_2N_2$, and its *p*-nitrophenylhydrazone, from the compound $C_{11}H_{11}O_2N_3$ (Angelico), 1905, A., i, 660.
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  $C_{14}H_{22}O$, and its oxime, from 1-methyl-$\Delta^3$-cyclohexen-4-ol (Mannich and Hâncu), 1908, A., i, 276.
  $C_{14}H_9O_3Br_3$, from the ketone $C_{16}H_{16}O_3$ (Auwers and Rietz), 1907, A., i, 939.
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  $C_{15}H_{24}O$, from α- and β-gurjunene, and its oxime (Deussen and Philipp), 1910, A., i, 575.
  $C_{15}H_{30}O$, from oxidation of α-phytol, and its derivatives (Willstätter, Meyer, and Hüni), 1911, A., i, 147.
  $C_{15}H_{19}O_4N_3$, semicarbazone of, from ethyl benzoylacetonylacetate and semicarbazide (Borsche and Fels), 1906, A., i, 510.
  $C_{16}H_{16}O_3$, from *o*-methoxybenzoylchloride and *p*-cresol methyl ether (Auwers and Rietz), 1907, A., i, 939.

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  $C_{18}H_{26}O$, from the condensation of cyclohexanone (Mannich), 1907, A., i, 205.
  $C_{18}H_{34}O$, from the condensation of methyl heptyl ketone (Thoms and Mannich), 1903, A., i, 679.
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  $C_{18}H_{21}O_3N$, and its derivatives, from β-ethylthiocodide hydrochloride (Pschorr and Krech), 1910, A., i, 422.
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  $C_{20}H_{42}O$, and its oxime, from degradation products of cholesterol (Windaus), 1912, A., i, 449.
  $C_{20}H_{27}O_3NS$, and its derivatives, from β-ethylthiocodide (Pschorr and Krech), 1910, A., i, 422.
  $C_{21}H_{22}O_3$, from 4:6-dimethylcoumarin and sodium ethoxide, and its derivatives (Fries and Volk), 1911, A., i, 205.
  $C_{22}H_{42}O$, and its oxime, phenylhydrazone, and semicarbazone, from the condensation of methyl nonyl ketone (Thoms and Mannich), 1903, A., i, 679.
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**Ketopropyltetrahydro*iso*quinoline.** See Propyltetrahydro*iso*quinolone.

**Ketopyridine.** See Pyridone.

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*p*-**Menthan-8-ol** (Perkin and Pickles), 1905, T., 639; P., 130.

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**Menthan-3-one**, 4-bromo-, and 4- and 5-chloro- (Kötz and Steinhorst), 1911, A., i, 211.

*m*-**Menthan-2-one**, synthesis of (Kötz and Michels), 1907, A., i, 58.

*m*-**Menthan-2- and -4-ones**, synthesis of, from 1-methylcyclohexan-2- and -4-ones (Kötz and Michels), 1906, A., i, 666.

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*p*-**Menthene**, α- and β-2:8-*di*hydroxy- (Rupe and Schlochoff), 1905, A., i, 450.

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$\Delta^{8(9)}$-**Menthene**, synthesis of (Semmler and Rimpel), 1906, A., i, 682.

$\Delta^{8(9)}$-**Menthene**, 3-hydroxylamino-, and its acyl and nitroso-compounds (Mahla), 1903, A., i, 264.

$\Delta^{8(9)}$-*m*-**Menthene** (Kijner and Zavadovsky), 1911, A., i, 1029.

$\Delta^{8(9)}$-*p*-**Menthene** (Perkin and Pickles), 1905, T., 639; P., 130.

*i*-**Menthene** ($\Delta^3$-p-*menthene*), synthesis of, and its nitrosochloride (Perkin), 1905, P., 255; 1906, T., 832.

*i*-$\Delta^{4(8)}$-**Menthene**, synthesis of (Wallach), 1906, A., i, 682.

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$\Delta^6$-**Menthene-2-amine** and its hydrochloride (Harries and Johnson), 1905, A., i, 535.

$\Delta^4$-**Menthene-2:6-dione** (Harries and Stähler), 1904, A., i, 431.

$\Delta^8$-**Menthene-2:6-dione** and its oxime and semicarbazone, and reaction with phenylhydrazine (Harries and Stähler), 1904, A., i, 430.

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- **$\Delta^5$-*o*-Menthenol(8)** and its phenylurethane (Perkin), 1911, T., 736; P., 95.
- **$\Delta^6$-*o*-Menthenol(8)** (Perkin), 1911, T., 740; P., 95.
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- **$\Delta^2$-*m*-Menthenol(8)** *d*- and *dl*-, synthesis of, and their phenylurethanes (Haworth, Perkin, and Wallach), 1911, T., 125, 129; P., 4.
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- **$\Delta^5$-*m*-Menthenol(8)**, *dl*-, *d*-, and *l*- (Perkin), 1910, T., 2139, 2141, 2143.
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- **$\Delta^3$-*p*-Menthen-1-ol.** See Terpinene-1-ol.
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  - *dl*-, density, magnetic rotation and refractive power of (Perkin), 1906, T., 851.
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- *o*-**Menthen-5-one**, hydrochloride of the oxime, and semicarbazone of (Kötz and Anger), 1911, A., i, 309.
- *l*-**Menthoethylheptanonolide** (Schimmel & Co.), 1908, A., i, 667; (Gildemeister and Köhler), 1910, A., i, 181.
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*p*-**Menthone,** syntheses of optically active (Kötz and Schwarz), 1908, A., i, 37.
*d*-*iso***Menthone** in the oil of American pennyroyal (Barrowcliff), 1907, T., 875; P., 114.
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*d*-*iso***Menthonecarboxylic acid** (Gardner, Perkin, and Watson), 1910, T., 1770.
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*l*-**Menthylamine** benzene-sulphonate and -disulphonate (Kipping and Martin), 1909, T., 493; P., 66.
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*l*-**Menthylamines,** the four optically isomeric, and their salts, and benzoyl and formyl derivatives (Tutin and Kipping), 1903, P., 289; 1904, T., 65.
*l*-**Menthylcarbamic acid,** esters (Neville and Pickard), 1904, T., 689; P., 114.
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*o*-**Methoxybenzaldehyde**-*o*-**methoxybenzylhydrazone** and its derivatives (Curtius and Detoros), 1912, A., i, 506.
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*o*-**Methoxybenzamide** (*methylsalicylamide*) Sachs and Herold), 1907, A., i, 629.
*o*-**Methoxybenzamide**, 6-amino- (Friedländer, Bruckner, and Deutsch), 1912, A., i, 319.
**Methoxybenzene.** See Anisole.
1-*p*-**Methoxybenzeneazo-2-chloronaphthalene** and its acetyl derivatives (Charrier and Ferreri), 1911, A., i, 1046.
*p*-**Methoxybenzeneazodimethylaniline** and its absorption spectra, and methiodide of (Hewitt and Thomas), 1909, T., 1297; P., 190.
1-*p*-**Methoxybenzeneazo-2-naphthol** (Charrier and Ferreri), 1912, A., i, 813.
*o*- and *p*-**Methoxybenzeneazo**-*β*-**naphthols** (Charrier and Ferreri), 1911, A., i, 1046.
1-*o*- and *p*-**Methoxybenzeneazo-2-naphthyl methyl ethers** and their hydrochlorides (Charrier and Ferreri), 1912, A., i, 613.
*p*-**Methoxybenzenediazomethylaminocamphor.** See Camphoryl-*p*-methoxyphenylmethyltriazen.
*p*-**Methoxybenzenediazo**-*ψ*-**semicarbazinocamphor** and its reactions (Forster), 1906, T., 237; P., 31.
**1-Methoxybenzene-2-sulphonic acid**, 4-amino- (Bauer), 1909, A., i, 470.
**Methoxybenzfurazan.** See Methoxybenz*iso*oxadiazole.

**4-Methoxybenzhydrol** (Busch and Leefhelm), 1908, A., i, 153.

**4-Methoxybenzhydrol**, 2′:4′-*di*hydroxy-, dipotassium salt and diacetyl and dibenzoyl derivatives (Pope and Howard), 1910, T., 973; P., 88.

**4-Methoxybenzhydrylamine** and its derivatives (Busch and Leefhelm), 1908, A., i, 153.

*m*-**Methoxybenzidine** and its *N*-diacetyl and bis-*p*-methoxybenzylidene derivatives (Jacobson, Franz, and Hönigsberger), 1904, A., i, 203.

**4′-Methoxybenziloxime** and its methyl ether and its isomeride (Meisenheimer and Jochelson), 1907, A., i, 860.

**4′-Methoxybenziloxime-ββ-dimethylacetal** and its methyl ether (Meisenheimer and Jochelson), 1907, A., i, 860.

*o*-**Methoxybenzoic acid**, 6-chloro- (Ullmann and Panchaud), 1907, A., i, 63.
  4- and 5-hydroxy- (Fischer and Pfeffer), 1912, A., i, 559.
  3:5-*di*nitro- (Ullmann and Engi), 1909, A., i, 474.
  *di*thio- (*o-methoxyphenylcarbithionic acid*), methyl ester of (Höhn and Bloch), 1911, A., i, 49.

*m*-**Methoxybenzoic acid**, 2-amino-, and its salts (Ewins), 1912, T., 549.
  2- and 6-amino-, and 2- and 6-bromo- (Pschorr, Selle, Koch, Stoof, and Treidel), 1912, A., i, 775.
  6-chloro-, reactions of (Ullmann and Kipper), 1905, A., i, 596.

*p*-**Methoxybenzoic acid.** See Anisic acid.

**Methoxybenzoic acids**, *o*-, *m*-, and *p*-, menthyl esters of (Cohen and Dudley), 1910, T., 1739.

*o*-**Methoxybenzoic acids**, nitro-, isomeric (Keller), 1908, A., i, 285.

**Methoxybenzonitrile**, *di*nitro-, van Geuns', constitution of (Blanksma), 1908, A., i, 271.

**2-Methoxybenzonitrile**, 6-amino-, and its acetyl derivative (Friedländer, Bruckner, and Deutsch), 1912, A., i, 319.

**2-Methoxybenzophenone**, 5:5′-*di*bromo-2′-hydroxy- (Diels and Rosenmund), 1906, A., i, 674.
  5-hydroxy-, and its phenylhydrazone (Kauffmann and Grombach), 1906, A., i, 284.
  3:5-*di*nitro- (Ullmann and Broido), 1906, A., i, 188.

**3-Methoxybenzophenone**, 6-hydroxy- (Herzig and Hofmann), 1908, A., i, 190.

**3-Methoxybenzophenone**, 4:6-*di*hydroxy- (Bargellini and Martegiani), 1911, A., i, 966.

**4-Methoxybenzophenone**, 2′-amino- (Ullmann and Bleier), 1903, A., i, 176.
  *o*- and *p*-chloro-, α- and β-chloroimino-, α- and β-chloroimino-*p*-chloro- (Peterson), 1911, A., i, 880.
  2-chloro-5-nitro- (Ullmann and Ernst), 1906, A., i, 206.
  2-hydroxy- (König and v. Kostanecki), 1907, A., i, 62.
  3-iododichloride, and 3-iodo-, 3-iodoso-, and 3-iodoxy- (Willgerodt and Burkhard), 1912, A., i, 630.

**Methoxybenzophenones**, 2- and 4-, and their 4′-nitro-derivatives, and 4′-hydroxy- of the 4-compound (Auwers), 1904, A., i, 67.

*m*-**Methoxybenzophenonephenylhydrazone**, 6-hydroxy-, *O*-acetate (Auwers and Dannehl), 1909, A., i, 441.

**Methoxy-*o*-benzoquinone**, *tri*bromo-, methylhemiacetal of, and its acetyl derivative and phenylhydrazone (Jackson and Flint), 1908, A., i, 191.
  3:5:6-*tri*chloro-, methylhemiacetal of, and its acetyl derivative and phenylhydrazone (Jackson and MacLaurin), 1907, A., i, 856.

**3-Methoxy-*o*-benzoquinone** (Willstätter and Müller), 1911, A., i, 728.

**Methoxy-*p*-benzoquinone**, chloro*di*hydroxy-(Graebe and Hess), 1905, A., i, 698.

**5-Methoxy-*p*-benzoquinone**, 3-hydroxy-, and its acetate and its 4-oxime and its salts (Pollak and Gans), 1903, A., i, 252.

**Methoxy-*o*-benzoquinonedioxime**, chloro- (Green and Rowe), 1912, T., 2457.

**1-Methoxy-*o*-benzoquino-1:2:2-trioxide**, *octa*chloro-1′-hydroxy- (Jackson and MacLaurin), 1907, A., i, 856.

**5-Methoxybenzothiazole**, 1:4-*di*amino-, 4-acetyl derivative (Fichter and Beck), 1912, A., i, 106.

**5-Methoxybenz*iso*oxadiazole** (*methoxybenzfurazan*), 6-chloro-, and its oxide (Green and Rowe), 1912, T., 2457.

**Methoxybenzoyl cyanide**, *m*- and *p*- (Mauthner), 1909, A., i, 161.

*o*-**Methoxybenzoylacetic acid**, α-oximino-, methyl ester (Wahl and Silberzweig), 1912, A., i, 213.

*m*-**Methoxybenzoylacetic acid**, ethyl ester, and its derivatives (Wahl and Silberzweig), 1912, A., i, 114.
  oximino-, methyl ester (Wahl and Silberzweig), 1912, A., i, 214.

*o*-**Methoxybenzoylacetone** and its *iso*-nitroso- and *p*-nitrobenzeneazo-derivatives (Sachs and Herold), 1907, A., i, 628.

*o*-**Methoxybenzoylbenzamidine** (Titherley and Hughes), 1911, T., 1506.

**4′-Methoxy-2-benzoylbenzoic acid,** methyl ester, and isomeride of (Meyer and Turnau), 1909, A., i, 710.

**4′-Methoxy-2-benzoylbenzoic acid,** 2′-hydroxy-, methyl ester (Tambor and Schürch), 1910, A., i, 559.

**1-*p*-Methoxybenzoylcoumarone** (Zwayer and v. Kostanecki), 1908, A., i, 444.

**4-*p*-Methoxybenzoylfluorenone** (Pick), 1905, A., i, 68.

*p*-**Methoxybenzoylglycine,** ethyl ester (Franzen), 1909, A., i, 575.

**2-Methoxy-(*a*)-benzoyliminocinnamic** anhydride (Mauthner), 1910, A., i, 115.

**2-Methoxy-1-benzoyl-4-methylcoumarone** (Auwers), 1912, A., i, 485.

*p*-**Methoxybenzoylmethylglyoxime** peroxide (Harries and Tietz), 1904, A., i, 428.

*p*-**Methoxybenzoyl-ψ-methylthiocarbamide** (Johnson and Jamieson), 1906, A., i, 352.

*p*-**4-Methoxybenzoyloxybenzoic acid,** methyl ester (Mauthner), 1912, A., i, 267.

**5-Methoxy-2-benzoylphenoxyacetic acid** and its ethyl ester (Motylewski), 1909, A., i, 822.

**Methoxybenzoylphenylacetylene** and the action of bases on (Watson), 1904, T., 1324; P., 181.

*p*-**Methoxybenzoyl-*α*-phenylbenzylhydrazine** (Franzen), 1909, A., i, 575.

*β*-**Methoxybenzoyl-*α*-phenylthiolstyrene** (Ruhemann), 1905, T., 467; P., 123.

*p*-**Methoxybenzoylpropionic acid,** methyl ester (Bargellini and Giua), 1912, A., i, 356.

*p*-**Methoxybenzoylpropionic acid,** bromo- (Bougault), 1909, A., i, 102.
  2-hydroxy-, and its methyl ester, preparation of (Perkin and Robinson), 1908, T., 508.

*o*-**Methoxybenzyl alcohol,** 5-bromo- (Knorr and Hörlein), 1909, A., i, 918.

*m*-**Methoxybenzyl alcohol** (Pschorr, Dickhäuser, and Zeidler), 1912, A., i, 766.

*p*-**Methoxybenzyl alcohol.** See Anisyl alcohol.

**4-Methoxybenzyl bromide,** 3:5-*di*bromo- (Auwers), 1907, A., i, 918.

**2-Methoxybenzyl chloride,** 5-bromo-, and corresponding nitrile (Knorr and Hörlein), 1909, A., i, 919.

**3-Methoxybenzyl chloride** (Pschorr, Dickhäuser, and Zeidler), 1912, A., i, 766.

**Methoxybenzylacetone** and its phenylhydrazone (Harries and Gollnitz), 1904, A., i, 427.

**Methoxybenzylamine,** *o*-hydroxy-, *N*-acyl derivatives of (Einhorn, Bischkopff, Szelinski, and Mauermayer), 1906, A., i, 246.

*o*-**Methoxybenzylamine** and its salts (Erlenmeyer and Bade), 1905, A. i, 131.

*m*-**Methoxybenzylamine** and its hydrochloride (Curtius and Potter), 1912, A., i, 508.

*o*-**Methoxybenzylazoimide** (Curtius and Detoros), 1912, A., i, 507.

*m*-**Methoxybenzylazoimide** (Curtius and Potter), 1912, A., i, 508.

*p*-**Methoxybenzylazoimide** (Curtius and Traumann), 1912, A., i, 508.

**4′-Methoxy-2-benzylbenzoic acid,** 2′-hydroxy- (Tambor and Schürch), 1910, A., i, 559.

*p*-**Methoxybenzyldibenzyl ketone.** See *αγ*-Diphenyl-*δ*-*p*-methoxyphenyl-*β*-butanone.

**2-*p*-Methoxybenzyl-1:3-dihydro*iso*indole** and its salts (Tiffeneau), 1911, A., i, 810.

*α*-*p*-**Methoxybenzyl-*αα*-dimethylacetophenone** (Haller and Bauer), 1911, A., i, 726.

*p*-**Methoxybenzyldimethylamine** and its salts (Tiffeneau), 1911, A., i, 779.

**4-*p*-Methoxybenzyl-1:3-dimethylhydantoin** (Johnson and Nicolet), 1912, A., i, 585.

**4-*p*-Methoxybenzylhydantoin,** 4-*m*-amino-, 4-*m*-amino-*p*-hydroxy-, 4-*m*-bromo-, 4-hydroxy-4-*α*-hydroxy-*m*-nitro-, 4-*m*-nitro-, and their salts (Johnson and Bengis), 1912, A., i, 809.

*o*-**Methoxybenzylhydrazine** and its hydrochloride and nitroso- (Curtius and Detoros), 1912, A., i, 506.

*m*-**Methoxybenzylhydrazine** and its derivatives (Curtius and Potter), 1912, A., i, 507.

*p*-**Methoxybenzylhydrazine** and its derivatives (Curtius and Traumann), 1912, A., i, 508.

*α*-*o*-**Methoxybenzylhydrazonopropionic acid** (Curtius and Detoros), 1912, A., i, 507.

*α*-*m*-**Methoxybenzylhydrazonopropionic acid** (Curtius and Potter), 1912, A., i, 507.

*a*-*p*-**Methoxybenzylhydrazonopropionic acid** (Curtius and Traumann), 1912, A., i, 508.

**4′-Methoxy-2-benzylhydrindene,** 1:2′-*di*hydroxy- (Perkin and Robinson), 1907, T., 1092.

**Methoxybenzylideneacetophenone.** See Phenyl methoxystyryl ketone.

**2-*m*-Methoxybenzylideneacetyl-1-naphthol** (v. Kostanecki), 1908, A., i, 359.

*p*-**Methoxybenzylideneamino-*a*-alkylcinnamic acids,** esters, and their liquid crystals (Vorländer and Kasten), 1908, A., i, 641.

*o*-**Methoxybenzylidene-*p*-aminobenzoic acid** (Senier and Shepheard), 1909, T., 1949.
and its ethyl ester (Manchot and Furlong), 1910, A., i, 34.

*m*-**Methoxybenzylidene-*p*-aminobenzoic acid,** *p*-hydroxy-, and its ethyl ester (Manchot and Furlong), 1910, A., i, 33.

*a*-*p*-**Methoxybenzylideneamino-*a*-*p*-methoxyphenylacetamide** (Clarke and Francis), 1911, T., 323.

**2-*p*-Methoxybenzylideneamino-5-nitrophenol** (Jacobson and Hönigsberger), 1904, A., i, 207.

*o*-**Methoxybenzylidene-*p*-aminophenol** (Manchot and Palmberg), 1912, A., i, 350.

*o*- and *p*-**Methoxybenzylideneamino-*a*-phenylacetamide** (Clarke and Francis), 1911, T., 321.

*o*-**Methoxybenzylideneaniline** (Noelting), 1910, A., i, 177.

*m*-**Methoxybenzylideneaniline,** and 2-hydroxy-, and its methyl ether and 4-hydroxy- (Noelting), 1910, A., i, 177.

*m*-**Methoxybenzylideneaniline,** 2-hydroxy- (Senier, Shepheard, and Clarke), 1912, T., 1956.
*p*-hydroxy- (Ott), 1905, A., i, 376.
2-iodo- (Mayer), 1912, A., i, 478.

*p*-**Methoxybenzylideneaniline** (Ott), 1905, A., i, 376.

**Methoxybenzylideneanilines,** *o*-, *m*-, and *p*-, and their behaviour with methyl iodide (Freund and Becker), 1903, A., i, 563.

**3-Methoxybenzylidene-*o*-, -*m*-, and -*p*-anisidines,** 2-hydroxy- (Senier, Shepheard, and Clarke), 1912, T., 1958.

**3-Methoxybenzylideneanthranilic acid,** 4-hydroxy- (Wolf), 1910, A., i, 736.

**2- and 4-Methoxybenzylideneanthranilic acids** (Wolf), 1910, A., i, 736.

*m*-**Methoxybenzylideneanthraquinonyl-2-hydrazone,** *p*-hydroxy- (Möhlau, Viertel, and Reiner), 1912, A., i, 705.

*p*-**Methoxybenzylideneanthraquinonyl-1- and 2-hydrazones** (Möhlau, Viertel, and Reiner), 1912, A., i, 704.

*p*-**Methoxybenzylidenebisphenylanilinoacetamide** (Minovici and Zenovici), 1912, A., i, 700.

*p*-**Methoxybenzylidenebisphenylchloroacetamide** (Minovici and Zenovici), 1912, A., i, 700.

*p*-**Methoxybenzylidenebisphenylphenylhydrazinoacetamide** (Minovici and Zenovici), 1912, A., i, 700.

**3-Methoxybenzylidene-*o*-, -*m*-, and -*p*-bromoanilines,** 2-hydroxy- (Senier, Shepheard, and Clarke), 1912, T., 1957.

**5-*p*-Methoxybenzylidene-3-*iso*butylrhodanine** (Nägele), 1912, A., i, 795.

*o*-**Methoxybenzylidene-*o*-chloroaniline** (Senier and Shepheard), 1909, T., 1947.

*p*-**Methoxybenzylidene-*o*-chloroaniline** (Fischer and Neber), 1912, A., i, 438.

**3-Methoxybenzylidene-*o*-, -*m*-, and -*p*-chloroanilines,** 2-hydroxy- (Senier, Shepheard, and Clarke), 1912, T., 1957.

**Methoxybenzylidene*iso*coumaranones,** 2′-, 3′-, and 4′- (Czaplicki, v. Kostanecki, and Lampe), 1909, A., i, 236.

**5-*p*-Methoxybenzylidene-3-ψ-cumyl- and 3-*iso*hexyl-rhodanic acids** (Kaluza), 1910, A., i, 130.

*m*-**Methoxybenzylidenecyanoacetamide,** *p*-hydroxy- (Piccinini), 1904, A., i, 919.

*p*-**Methoxybenzylidenedeoxybenzoins,** *a*- and *β*-, and the oxime of the *a*-compound (Klages and Tetzner), 1903, A., i, 101.

**6-Methoxy-3-benzylideneflavanone** and its hydrochloride (Auwers and Arndt), 1909, A., i, 669.

*p*-**Methoxybenzylidenehippuric acid** and its methyl ester, amide, imide, and piperidide (Erlenmeyer and Wittenberg), 1905, A., i, 240.

*p*-**Methoxybenzylidenehydantoin** (Wheeler, Hoffman, and Johnson), 1911, A., i, 923.

**4-*p*-Methoxybenzylidenehydantoin,** 4-*m*-amino-, 4-*m*-bromo-, and 4-*m*-nitro- (Johnson and Bengis), 1912, A., i, 809.

*m*-**Methoxybenzylidenehydrazine,** and its phenylthiosemicarbazide (Franzen and Eichler), 1910, A., i, 700.

**4′-Methoxy-2-benzylidene-1-hydrindone,** 2′-hydroxy-, and its acetyl derivative (Perkin and Robinson), 1907, T., 1091.

**6-Methoxy-2-benzylidene-1-hydrindone** (Perkin and Robinson), 1907, T., 1094.

**Methoxybenzylidenemalononitrile** (Hinrichsen and Lohse), 1905, A., i, 132.

**4-*m*-Methoxybenzylidenemethyl-6-methyl-2-pyrimidone,** *p*-hydroxy-, and its salts (Stark and Bögemann), 1910, A., i, 437.

*p*-**Methoxybenzylidenemethylsemicarbazide** (Michaelis and Hadanck), 1908, A., i, 1020.

**3-Methoxybenzylidene-β-naphthylamine,** 2-hydroxy- (Senier, Shepheard, and Clarke), 1912, T., 1958.

*p*-**Methoxybenzylideneoxindole** (Wahl and Bagard), 1909, A., i, 735.

*p*-**Methoxybenzylidenephenoxyacetone.** See α-Phenoxy-*p*-methoxystyrylmethyl ketone.

*m*-**Methoxybenzylidenephenylhydrazines,** *p*-hydroxy- (Ott), 1905, A., i, 376.

*p*-**Methoxybenzylidenephenylhydrazines** (Ott), 1905, A., i, 376.

**5-*p*-Methoxybenzylidene-rhodanic** and **-3-allylrhodanic acids** (Andreasch and Zipser), 1903, A., i, 856.

*m*-**Methoxybenzylidenesemicarbazide,** *p*-hydroxy- (Ott), 1905, A., i, 376.

**3-Methoxybenzylidene-*o*-** and **-*p*-toluidines,** 2-hydroxy- (Senier, Shepheard, and Clarke), 1912, T., 1956.
  4-hydroxy- (Manchot and Furlong), 1910, A., i, 33.

**2-Methoxybenzylidene-*o*-4-xylidine** (Senier and Shepheard), 1909, T., 1946.

**3-Methoxybenzylidene-*o*-4-, -*m*-4-,** and **-*p*-xylidines,** 2-hydroxy- (Senier, Shepheard, and Clarke), 1912, T., 1957; P., 237.

**Methoxybenzylidene-.** See also Anisylidene-.

*p*-**Methoxybenzylmalonic acid** and α-bromo- (Friedmann and Gutmann), 1910, A., i, 741.

*p*-**Methoxybenzylmethylamine** and its hydrochloride (Tiffeneau), 1911, A., i, 779.

*p*-**Methoxybenzyl methyl ketone** (*anisylacetone*) and its oximes (Hoering), 1905, A., i, 903.
  formation of, from anethole glycol (Tiffeneau and Daufresne), 1907, A., i, 701.

**1-*o*-Methoxybenzyl-3-methyl-5-pyrazolone** (Curtius and Detoros), 1912, A., i, 506.

**1-α-Methoxybenzyl-2-naphthol-3-carboxylic acid,** methyl ester of (Friedl), 1910, A., i, 742.

*p*-**Methoxybenzyl*cyclo*pentene** and its compound with bromine (Thiele and Balhorn), 1906, A., i, 640.

**4-Methoxy-5-benzylpyrimidine,** 6-chloro-2-amino-, and 2:6-*di*chloro- (Kast), 1912, A., i, 1023.

**4-*p*-Methoxybenzyl*iso*quinoline** and its platinichloride (Rügheimer and Albrecht), 1903, A., i, 439.
  methiodide (Rügheimer and Schaumann), 1903, A., i, 439.

*o*-**Methoxybenzylsemicarbazide** (Curtius and Detoros), 1912, A., i, 507.

**Methoxyberberinium salts** (Pyman), 1911, T., 1696; P., 215.

**2-Methoxybrazan** (v. Kostanecki and Lampe), 1908, A., i, 672.

**2-Methoxybrazanquinone** (v. Kostanecki and Lampe), 1908, A., i, 672.
  *di*nitro- (v. Kostanecki and Lampe), 1908, A., i, 907.

**δ-Methoxybutane,** αβ-*di*hydroxy-, and its diphenylurethane (Pariselle), 1909, A., i, 691.

**δ-Methoxybutane-ααγγ-tetracarboxylic acid** and its ethyl ester and silver salt, synthesis and hydrolysis of (Simonsen), 1908, T., 1784.
  tetraethyl ester, preparation of (Perkin and Simonsen), 1909, T., 1171.

α- and **β-Methoxybutan-β-ones** and their phenylhydrazones (Gauthier), 1909, A., i, 354.

**γ-Methoxybutyric acid,** αβ-*di*hydroxy- (Irvine and Hynd), 1909, T., 1226; P., 176.

**3′-Methoxycaffeine,** 8-chloro- (Fischer and Ach), 1906, A., i, 219.

**Methoxycamphoroxalic acid,** methyl ester (Tingle and Bates), 1911, A., i, 54.

**3-Methoxycarbazole** and its picrate (Borsche, Witte, and Bothe), 1908, A., i, 368.

6-(or 7-)**Methoxy*iso*carbostyril-3-carboxylic acid,** 4-hydroxy-, methyl ester (Kusel), 1904, A., i, 619.

3-**Methoxychalkone.** See Phenyl 3-methoxystyryl ketone.

4′-**Methoxychalkone,** 2-hydroxy-. See 4-Methoxyphenyl 2-hydroxystyryl ketone.

**Methoxy*di*chloroacetic acid,** methyl ester, condensation of, with aniline, phenylhydrazine, piperidine, and *p*-toluidine (Lander), 1904, T., 984; P., 131.

*p*-**Methoxy-α-chlorobenzyldeoxybenzoin** (Klages and Tetzner), 1903, A., i, 101.

2-**Methoxy-1-α-chloroethylbenzene** and its salts (Klages and Eppelsheim), 1904, A., i, 45.

α-**Methoxy-*p*-chlorophenylacetic acid** (Straus), 1912, A., i, 992.

β-**Methoxy-αα-*di*chloropropylene** (Vitoria), 1905, A., i, 110.

7-**Methoxychromanone** and its semicarbazone (Perkin and Robinson), 1912, P., 7.

2-**Methoxycinchonic acid** and its methyl ester (Meyer), 1906, A., i, 108; (Mulert), 1906, A., i, 534.

*p*-**Methoxycinnamaldazine,** liquid crystals of (Rotarski), 1908, A., i, 641.

*p*-**Methoxycinnamaldehyde** and its phenylhydrazone and semicarbazone (Scholtz and Wiedemann), 1903, A., i, 437.
  presence of, in oil of tarragon, and its oxime and semicarbazone (Daufresne), 1908, A., i, 19; (Daufresne and Flament), 1908, A., i, 558.

6-*o*-**Methoxycinnamamide** (Stoermer, Friderici, Bräutigam, and Neckel), 1911, A., i, 296.

*b*-*o*-**Methoxycinnamic acid,** ethyl ester (Stoermer, Friderici, Bräutigam, and Neckel), 1911, A., i, 297.

*m*-**Methoxycinnamic acid,** methyl ester (Posner), 1911, A., i, 53.

*m*-**Methoxycinnamic acid,** α-amino-, benzoyl derivative, lactone of (Pschorr, Dickhäuser, and Zeidler), 1912, A., i, 766.
  4-amino-, acetyl derivative (Khotinsky and Jacopson-Jacopmann), 1909, A., i, 805.
  6-bromo-α-amino-, α-benzoyl derivative, and its lactone (Pschorr and Koch), 1912, A., i, 766.
  4:6-*di*hydroxy- (Moore), 1911, T., 1046; P., 119.

*p*-**Methoxycinnamic acid,** synthesis of (Bunge), 1909, A., i, 478.
  liquid crystals of (Rotarski), 1908, A., i, 640.

*p*-**Methoxycinnamic acid,** disulphide (Curtius and Kastner), 1911, A., i, 333.

*p*-**Methoxycinnamic acid,** 3:5-*di*iodo-, and its salts and esters (Wheeler and Johns), 1910, A., i, 114.

*p*-**Methoxy*allo*cinnamic acid** and its derivatives (Stoermer, Friderici, Bräutigam, and Neckel), 1911, A., i, 297.

2-**Methoxycoumaran,** 4:6-*di*bromo- (Fries and Moskopp), 1910, A., i, 332.

**Methoxycoumaranone** (Felix and Friedländer), 1910, A., i, 279.

3-**Methoxycoumaranone** (Blom and Tambor), 1905, A., i, 916.

2-**Methoxycoumarilic acid** and its ethyl ester (Auwers), 1912, A., i, 1009.

8-**Methoxycoumarin** (Noelting), 1910, A., i, 177.

2-**Methoxycoumarone** (Auwers), 1912, A., i, 1009.

5-**Methoxycoumarone** (Dumont and v. Kostanecki), 1909, A., i, 320.

2-**Methoxy-4-cyanobenzyl-α-naphthol** and its acetate (Sachs and Craveri), 1905, A., i, 910.

*p*-**Methoxydeoxybenzoin** and its bromo-derivative (Meisenheimer and Jochelson), 1907, A., i, 861.

7-**Methoxy-9:10-di-*p*-anisyl-4:9-dihydroacenaphthylene** (Beschke and Kitaj), 1909, A., i, 918.

7-**Methoxy-9:10-di-*p*-anisyl-1:2:3:4-tetrahydroacenaphthene** (Beschke and Kitaj), 1909, A., i, 918.

2-**Methoxydibenzyl** (v. Kostanecki, Rost, and Szubrański), 1905, A., i, 341.

2-**Methoxydibenzyl,** 4′-hydroxy- (Stoermer and Friemel), 1911, A., i, 633.

2-**Methoxydibenzyl-α-carboxylic acid** (Czaplicki, v. Kostanecki, and Lampe), 1909, A., i, 235.

α-**Methoxy-αε-di-*p*-chlorophenyl-$\Delta^{\beta\delta}$-pentadiene** (Straus), 1912, A., i, 992.

2-**Methoxy-5:5-diethylbarbituric acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1025.

4-**Methoxydiethylphthalide** and its nitro-derivative (Bauer), 1911, A., i, 871.

5-**Methoxydiethylphthalide,** 4:6-*di*amino-, and its diacetyl derivative (Bauer), 1908, A., i, 274.

β-**Methoxydihydroanethole,** α-hydroxy- (Mameli and Bignami), 1909, A., i, 715.

**7-Methoxy-3:4-dihydro-1:4-benzopyrone** (Tschitschibabin and Nikitin), 1911, A., i, 1007.

**Methoxydihydro-β-camphylic acid** (Perkin), 1903, T., 844, 869.

**4-Methoxydihydrochalkone** and its semicarbazone (Bargellini and Bini), 1912, A., i, 118.

**Methoxydihydrodi*cyclo*pentadiene,** nitro- (Rule), 1908, T., 1562; P., 175.
and its reactions (Wieland and Stenzl), 1908, A., i, 519.

**10-Methoxy-1:2-dihydronaphthacridine** (Bucherer and Seyde), 1907, A., i, 345.

**2-Methoxydihydro-6-pyrimidone,** 4-imino- (Engelmann), 1909, A., i, 192.

**6-Methoxydihydroquinaldine-5-aldehyde,** 7-hydroxy-, and its salts (Book), 1903, A., i, 654.

**6-Methoxy-di- and -tetra-hydroquinaldine-5-carboxylic acids,** 4:7-*di*hydroxy-, and their salts (Book), 1903, A., i, 653.

α-**Methoxydihydro*iso*safrole,** bromo-derivatives (Hoering), 1905, A., i, 903.

β-**Methoxydihydro*iso*safrole,** α-hydroxy-, and its acetyl derivative (Mameli and Bonu), 1909, A., i, 715.

**Methoxy-*o*-dihydroxycatechol hemi-ether,** *hexa*chloro-, and its derivatives (Jackson and Kelley), 1912, A., i, 275.

β-**Methoxy-β-3:4-dimethoxyphenylethane,** α-nitro- (Rosenmund), 1912, A., i, 449.

β-**Methoxy-β-3:4-dimethoxyphenylethylamine** and its hydrochloride (Rosenmund), 1912, A., i, 449.

**3-Methoxy-4-dimethylaminoethoxyphenanthrene** and its additive salts and methiodide (Knorr), 1905, A., i, 813.

**4-Methoxy-1:3-dimethylanthraquinone** (Bentley, Gardner, Weizmann, and Temperley), 1907, T., 1635.

**4-Methoxy-2:6-dimethylbenzaldehyde** and its oxime, synthesis of (Gattermann), 1908, A., i, 33.

**4-Methoxy-3:5-dimethylbenzaldehyde,** synthesis of (Gattermann), 1908, A., i, 33.

**4-Methoxy-3:5-dimethylbenzophenone** (Auwers and v. Markovits), 1908, A., i, 630.

**2′-Methoxy-3′:5′-dimethyl-2-benzoylbenzoic acid** (Bentley, Gardner, Weizmann, and Temperley), 1907, T., 1634.

**5-Methoxy-2:3-dimethylcoumarilic acid** and its ethyl ester and potassium salt (v. Kostanecki and Tambor), 1909, A., i, 319.

**5-Methoxy-2:3-dimethylcoumarilyl chloride** (Tambor, Günsberg, Keller, Chanschy-Herzenberg, Rosenknopf, and Lichtenbaum), 1912, A., i, 44.

**5-Methoxy-2:3-dimethylcoumarone** (v. Kostanecki and Tambor), 1909, A., i, 319.

**8-Methoxy-5:7-dimethylfluorone** (Liebschütz and Wenzel), 1904, A., i, 518.

**3-Methoxy-1:1-dimethyl-$\Delta^3$-*cyclo*hexenylidene-5-cyanoacetic acid** and isomeric ethyl esters of (Crossley and Gilling), 1910, T., 528.

**5-Methoxy-1:3-dimethylhydantoylmethylamide** (Biltz), 1910, A., i, 523.

**4-Methoxy-2:6-dimethylphenol** (Bamberger), 1903, A., i, 624.

**3(5)-Methoxy-5(3):7-dimethylphenoxazone,** 4-amino-, and its dihydrochloride and acetyl derivative (Henrich and Roters), 1909, A., i, 57.

**6-Methoxy-2:4-dimethylpyridine,** 3-cyano- (v. Meyer and Henning), 1908, A., i, 911.

**6-Methoxy-2:5-dimethylpyridine-3-carboxylic acid** and its ethyl ester (Errera and Labate), 1904, A., i, 190.

**5-Methoxy-2:4-dimethylquinoline** and its salts (Koenigs and Mengel), 1904, A., i, 528.

*p*-**Methoxy-4:6-dimethyl-2-stilbazole** and its salts (Proske), 1909, A., i, 414.

**Methoxydi*cyclo*pentadiene,** compound of, with platinous chloride (Hofmann and v. Narbutt), 1908, A., i, 519.

**2-Methoxydiphenyl** (Jacobson, Franz, and Hönigsberger), 1904, A., i, 203.

**Methoxydiphenyl** sulphide (Hinsberg), 1903, A., i, 251.

*o*-**Methoxydiphenyl** sulphide (Mauthner), 1906, A., i, 949.

**7-Methoxy-9:9-diphenylacenaphthenone,** 2-hydroxy-, and its benzoate (Beschke, Beitler, and Strum), 1909, A., i, 917.

**2′-Methoxydiphenylacetamide,** 4-hydroxy- (Bistrzycki, Paulus, and Perrin), 1911, A., i, 869.

α-**Methoxydiphenylacetanilide** (Klinger), 1912, A., i, 557.

- α-**Methoxydiphenylacetic acid** (Klinger), 1912, A., i, 701.
- **2′-Methoxydiphenylacetic acid,** 2-hydroxy-, lactone of (Bistrzycki, Paulus, and Perrin), 1911, A., i, 869.
- **4′-Methoxydiphenylacetic acid,** 4-hydroxy- (Bistrzycki, Paulus, and Perrin), 1911, A., i, 868.
- **4′-Methoxydiphenylacetonitrile,** 4-hydroxy-, and its acetyl derivative (Bistrzycki, Paulus, and Perrin), 1911, A., i, 868.
  - 3:4-*di*hydroxy-, and its diacetate (Bistrzycki, Paulus, and Perrin), 1911, A., i, 868.
- **2-Methoxydiphenylamine** (Ullmann and Kipper), 1907, A., i, 845.
- **2-Methoxydiphenylamine,** 4′-amino-, and 4′-nitro- (Ullmann and Jüngel), 1909, A., i, 375.
  - *di*chloro-2′:4′-*di*nitro- (Reverdin and Crépieux), 1903, A., i, 858.
- **3-Methoxydiphenylamine,** 2:4-*di*nitro- (Blanksma), 1909, A., i, 150.
  - 4:6-*di*nitro- (Blanksma), 1904, A., i, 577.
  - 2:4:6-*tri*nitro- (Blanksma), 1903, A., i, 158.
- **4-Methoxydiphenylamine** and *N*- and 4′-nitroso-, and 4′-amino-, leucobase and imine from (Willstätter and Kubli), 1909, A., i, 976.
- **4-Methoxydiphenylamine,** 4′-chloro- (Wieland and Süsser), 1912, A., i, 905.
  - 4′-nitro- (Ullmann and Jüngel), 1909, A., i, 375.
- **4-Methoxydiphenylamine-2-carboxylic acid** (Ullmann and Kipper), 1905, A., i, 597.
- **5-Methoxydiphenylamine-2-carboxylic acid** (Ullmann and Wagner), 1907, A., i, 848.
- **Methoxydiphenylamine-2-carboxylic acids,** 2′- and 3′- (Ullmann and Kipper), 1907, A., i, 845.
- **Methoxydiphenylamine-2-sulphonic acid,** 4-nitro-4′-, and its potassium salt, 4-amino-4′-, 4-nitro-2′-, and its potassium salt, and 4-amino-2′- (Ullmann and Jüngel), 1909, A., i, 375.
- α-**Methoxy**-αγ-**diphenylbutane,** βδ-*di*nitro-, and its monophenylhydrazone and tribromo-derivative (Meisenheimer and Heim), 1905, A., i, 269.
  - reactions of, and its bromo-derivatives (Meisenheimer and Heim), 1907, A., i, 859.
- **7-Methoxy-9:10-diphenyl-3:4-dihydroacenaphthene** and its additive product with bromine (Beschke and Kitaj), 1909, A., i, 918.
- **2-Methoxy-3:4-diphenyl-5:5-dimethyl-**$\Delta^2$-*cyclo***pentenone** (Gray), 1909, T., 2147.
- α-**Methoxy**-αβ-**diphenylethane,** β-nitro-, stereoisomeric, preparation of (Heim), 1911, A., i, 717.
- *o*-**Methoxy**-αα-**diphenyl-ethane** and **-ethylene** (Stoermer and Kippe), 1904, A., i, 182.
- α-**Methoxy**-αβ-**diphenylethanes** (α- and β-), β-nitro-, reactions of (Meisenheimer and Heim), 1907, A., i, 859.
- α-*p*-**Methoxy**-αδ-**diphenylfulgenic acid** and the fulgide (Stobbe, Badenhausen, and Kautzsch), 1906, A., i, 279.
- **5-Methoxy-4:5-diphenyl***iso***glyoxalone** and its acetate (Biltz and Rimpel), 1909, A., i, 743.
- α-**Methoxydiphenylmethane,** *tetra*bromo-*p*-*di*hydroxy-, and *tetra*chloro-*p*-*di*hydroxy-, and its diacetate (Zincke and Birschel), 1908, A., i, 782.
- δ-**Methoxy**-αγ-**diphenyl**-δ-*p*-**methoxy-** and -δ-*mp*-**methylenedioxy-phenyl**-β-**butanones** (Hertzka), 1905, A., i, 291.
- **5-Methoxy-4:5-diphenyl-1-methyl***iso***glyoxalone** (Biltz and Rimpel), 1909, A., i, 743.
- **4-Methoxy-3:4-diphenyl-2-methyl-**$\Delta^2$-*cyclo***pentenone** (Gray), 1909, T., 2135.
- *p*-**Methoxydiphenylphthalide** (Meyer and Fischer), 1911, A., i, 723.
- **8-Methoxy-2:3-diphenylquinoxaline,** 7-hydroxy- (Fichter and Schwab), 1906, A., i, 842.
- **2′-Methoxydiphenylsulphone-2-sulphinic acid** (Fries and Vogt), 1911, A., i, 557.
- **2′-Methoxydiphenylsulphone-2-sulphonic acid,** and its anilide (Fries and Vogt), 1911, A., i, 557.
- **2′-Methoxydiphenylsulphone-2-sulphonyl chloride** (Fries and Vogt), 1911, A., i, 557.
- **7-Methoxy-9:10-diphenyl-1:2:3:4-tetrahydroacenaphthene** (Beschke and Kitaj), 1909, A., i, 918.
- **3-Methoxy-1:4-diphenyl-1:2:4-triazolone** (Busch and Limpach), 1911, A., i, 335.
- **Methoxyeosin** (Friedl, Weizmann, and Wyler), 1907, T., 1586.
- **4-Methoxy-4′-ethoxyazoxybenzene.** See *p*-Anisoleazoxyphenetole.

**1-Methoxy-3-ethoxybenzene,** 2:6-*di*- and 2:4:6-*tri*-nitro- (Blanksma), 1908, A., i, 158.

**3-Methoxy-4-ethoxybenzenesulphonic acid** and its amide and chloride (Paul), 1906, A., i, 843.

**α-Methoxy-α-ethoxyethane,** ββ-*di*chloro- (Oddo and Mameli), 1904, A., i, 281.

**Methoxyethoxy-*N*-ethyl*iso*quinolone** (Decker and Dunant), 1908, A., i, 206.

**Methoxyethoxymethane** (Henry), 1908, A., i, 381.

**Methoxyethoxy-2-methylbenzaldehyde** and its oxime, synthesis of (Gattermann), 1908, A., i, 34.

**Methoxyethoxy-*N*-methyl*iso*quinolone** (Decker and Dunant), 1908, A., i, 206.

**3-Methoxy-4-ethoxy-1-propylbenzene,** 2:β-*di*- and 2:5:β-*tri*-bromo-α-hydroxy- and their methyl ethers (Hell and Bauer), 1904, A., i, 386.

**2-Methoxy-4′-ethoxystilbene** (Stoermer and Friemel), 1911, A., i, 632.

**α-Methoxyethylbenzene,** β:3:5-*tri*bromo-2-hydroxy-, and β:β:3:5-*tetra*bromo-2-hydroxy- (Fries and Moskopp), 1910, A., i, 332.

**4-Methoxy-3-ethyl*iso*carbostyril** (Ulrich), 1904, A., i, 529.

**4-Methoxy-1-ethylphthalazine** (Daube), 1905, A., i, 210.

**6-Methoxy-1-ethyl-2-quinolone** and its salts (Decker and Engler), 1903, A., i, 518.

**6-Methoxy-flavanone** and 3-*iso*nitroso-, and **-flavonol** and its acetyl derivative (v. Kostanecki and Lampe), 1904, A., i, 440.

**7-Methoxy-flavanone** and *iso*nitroso-, and **-flavonol** and its acetyl derivative (v. Kostanecki and Stoppani), 1904, A., i, 443.

**3′-Methoxy-flavanone,** 3-*iso*nitroso-, and **-flavonol** and its acetyl derivative (Gutzeit and v. Kostanecki), 1905, A., i, 366.

**4′-Methoxy-flavanone** and 3-*iso*nitroso-, and **-flavonol** and its acetyl derivative (Edelstein and v. Kostanecki), 1905, A., i, 460.

**2′-Methoxyflavone** (Pistermann and Tambor), 1912, A., i, 486.

**3-Methoxyfluorenone** (Ullmann and Bleier), 1903, A., i, 176.
  and its **2-carboxylic acid** and its methyl ester (Errera and La Spada), 1906, A., i, 277.
  and its diacetate (Friedl, Weizmann, and Wyler), 1907, T., 1586; P., 214.

**Methoxyfluorescein,** methyl ester, phenolbetaine and chloride of (Kehrmann, Dengler, and Scheunert), 1909, A., i, 250.

**Methoxyfluorescein,** *tetra*bromo-. See Methoxyeosin.

**α-Methoxyglyoxaline-4-propionic acid** and its hydrochloride and methyl ester hydrochloride (Gerngross), 1909, A., i, 189.

**Methoxy-groups,** elimination of (v. Kostanecki and Lampe), 1908, A., i, 442.
  replacement of, by alkyl radicles (Reformatsky), 1906, A., i, 136.
  replacement of the acetyl group by, under the action of diazomethane (Herzig and Tichatschek), 1906, A., i, 173.
  detection of (Herzig), 1908, A., ii, 638.
  estimation of (Goldschmiedt and Hönigschmid) 1904, A., ii, 94; (Stritar), 1904, A., ii, 95; (Kropatschek), 1904, A., ii, 686; (Kirpal), 1908, A., ii, 436.
  estimation of, in soils (Shorey and Lathrop), 1911, A., ii, 327.
  simplification of Zeisel's method of estimating (Perkin), 1903, T., 1367; P., 239.

**α-Methoxyhexane,** ζ-bromo-, and its magnesium derivative (Dionneau), 1907, A., i, 747.

**δ-Methoxy-$\Delta^{\beta}$-hexene** (Reif), 1906, A., i, 394; 1908, A., i, 847.

**Methoxy-$\Delta^{2}$-*cyclo*hexene** (Brunel), 1905, A., i, 869.

**Methoxyhexylene** and its dibromide (Dionneau), 1910, A., i, 354.

**α-Methoxy*cyclo*hexylmalonic acid,** ethyl ester (Hope and Perkin), 1909, T., 1366.

***p*-Methoxyhydratropylpyruvic acid,** iodo-lactone from (Bougault), 1908, A., i, 539.

***m*-Methoxyhydrazobenzene** (Jacobson, Franz, and Hönigsberger), 1904, A., i, 203.

**Methoxyhydropinene,** oximino-, and its urethane derivative (Deussen and Philipp), 1910, A., i, 575.

**Methoxy-1-α-hydroxyethylbenzenes,** 2-, 3-, and 4-, and their phenylurethanes (Klages and Eppelsheim), 1904, A., i, 45.

6(or 7)**-Methoxy-7**(or 6)**-[7**(or 6)**-hydroxy-6**(or **7**)**-methoxy-2-methyl-3:4-dihydro*iso*quinoliniumoxy]-2-methyl-3:4-dihydro*iso*quinolinium** chloride (Pyman), 1910, T., 278.

**6-Methoxy-5-hydroxymethyldihydroquinaldine**, 7-hydroxy-, and its aurichloride (Book), 1903, A., i, 654.

6(or 7)-**Methoxy-7**(or 6)-[**6:7-*di*hydroxy-2-methyl-3:4-dihydro*iso*quinoliniumoxy]-2-methyl-3:4-dihydro*iso*quinolinium** chloride and iodide (Pyman), 1910, T., 279.

**2-Methoxy-4-α-hydroxypropylphenol**, 6:β-*di*- and 3:6:β-*tri*-bromo-, and their acetyl derivatives (Zincke and Hahn), 1904, A., i, 42.

**2-Methoxyindene**, 3-cyano- (Moore and Thorpe), 1908, T., 180; P., 13.

**3-Methoxyindene**, 2-cyano- (Mitchell and Thorpe), 1910, T., 2278.

**7-Methoxy-2:3-indenobenzopyranol** (1:4) anhydroferrichloride (Perkin and Robinson), 1908, T., 1102.

**7-Methoxy-4:3-indenobenzopyranol(1:4)**, 4′:5′-*di*hydroxy-, salts of (Engels, Perkin, and Robinson), 1908, T., 1150.

**Methoxyindiazoneoxime**, hydroxy- (Sumuleanu), 1903, A., i, 635.

**3-Methoxyindole** and its **-2-carboxylic acid** and ethyl ester (Auwers), 1912, A., i, 1011.

**3-Methoxyindone-2-carboxylic acid**, ethyl ester (Hantzsch and Gajewski), 1912, A., i, 870.

**4-Methoxy-1-indoxylbenzene** and its **sulphonic acid** (Friedländer and Schuloff), 1908, A., i, 674.

**5- and 7-Methoxyisatin** (Kalle & Co.), 1910, A., i, 278.

**5-Methoxyisatin-3-phenylhydrazone** (Bauer), 1909, A., i, 467.

**1-Methoxyisatoxime** (Reissert), 1909, A., i, 52.

**5-Methoxy-2-isatoxime** and its sodium derivative (Wieland, Semper, and Gmelin), 1909, A., i, 610.

**4′-Methoxy-β-ketodibenzyl.** See *p*-Methoxydeoxybenzoin.

**α-Methoxy-β-ketopropane.** See Methyl acetolate.

**β-Methoxylamino-β-phenylpropionic acid** (Posner), 1906, A., i, 955.

*o*-**Methoxyleucomalachite-green** (Votoček and Jelínek), 1907, A., i, 245; (Votoček and Krauz), 1909, A., i, 519.

*p*-**Methoxymandelic acid**, optically active, and its ethyl ester and amide (Knorr), 1904, A., i, 894.

*m*-**Methoxymandelonitrile** (Czaplicki, v. Kostanecki, and Lampe), 1909, A., i, 235.

**β-Methoxymelilotic acid** (Billmann and Starcke), 1912, A., i, 461.

**β-Methoxymelilotic acid** and its **methyl ester** (Billmann and Hoff), 1912, A., i, 462.

*p*-**Methoxymesityl bromide**, *di*bromo-, and its compounds with bases (Auwers and Schrenk), 1906, A., i, 269.

*o*-**Methoxymethoxybenzaldehyde** (Hoering and Baum), 1909, A., i, 572.

*o*-**Methoxymethoxybenzoic acid** and its methyl ester (Hoering and Baum), 1909, A., i, 572.

**Methoxy-β-methoxycrotonic acid** and its ethyl and methoxymethyl esters and silver salt (Simonsen and Storey), 1909, T., 2109; P., 290.

**5-Methoxy-2-*p*-methoxyphenoxybenzoic acid** (*5-methoxy-*p*-anisylsalicylic acid*) (v. Baeyer, Aickelin, Diehl, Hallensleben, and Hess), 1910, A., i, 252.

**β-Methoxy-β-*p*-methoxyphenylethylamine** and its hydrochloride (Rosenmund), 1912, A., i, 449.

**2- and 4-Methoxy-1-methyl-3-acetonylbenzene** and their derivatives (Guillaumin), 1910, A., i, 478.

**2-Methoxy-1-methyl-3-ψ-allylbenzene** (Guillaumin), 1910, A., i, 375.

**3-Methoxy-1-methyl-4-ψ-allylbenzene** (Guillaumin), 1910, A., i, 375.
and its polymeride (Béhal and Tiffeneau), 1908, A., i, 631.

*p*′-**Methoxymethylaminoazobenzene**, *p*-nitro- (Witt and Kopetschni), 1912, A., i, 518.

*o*-**Methoxy-*m*-methyl-α-anilinoethylbenzene** and its *N*-acetyl derivative (Anselmino), 1907, A., i, 914.

**Methoxymethylanthraquinone**, hydroxy-, and its acetyl derivative from the root of *Morinda longiflora* (Barrowcliff and Tutin), 1907, T., 1912; P., 248.

**2-Methoxy-1-methylanthraquinone**, and its amino- and its acetyl derivative, bromo-, and nitro-derivatives (Bentley, Gardner, and Weizmann), 1907, T., 1631.

**4-Methoxy-1-methylanthraquinone** (Fischer and Sapper), 1911, A., i, 280.
and 6(7)-hydroxy- (Bentley, Gardner, Weizmann, and Andrew), 1907, T., 1633.

7(or 5-)-**Methoxy-5**(or 7)-**methylanthraquinone**, 1:4-*di*chloro- (Walsh and Weizmann), 1910, T., 692.

**6-Methoxy-2-methylbenzaldehyde**, 4-hydroxy-, and its azine, oxime, and phenylhydrazone (Gattermann), 1908, A., i, 31.

**3-Methoxy-4-methyl-1:2-benzanthraquinone** (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1912, A., i, 563.

**3-Methoxy-4-methyl-1:2-benzanthrone-9** (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1912, A., i, 563.

**2-Methoxy-5-methylbenzophenone,** 4′-amino-, 4′-hydroxy-, and 4′-nitro- (Auwers and Rietz), 1907, A., i, 938.

**4′-Methoxy-5-methylbenzophenone,** 2-hydroxy-, and its dibromo-derivative (Auwers and Rietz), 1907, A., i, 938.

**Methoxy-3-methyl-β-benzoylacrylic acid** (Bentley, Gardner, and Weizmann), 1907, T., 1640.

**2′-Methoxy-5′-methyl-2-benzoylbenzoic acid** (Bentley, Gardner, Weizmann, and Andrew), 1907, T., 1633.

**4′-Methoxy-5′-methyl-2-benzoylbenzoic acid** and bromo- (Bentley, Gardner, and Weizmann), 1907, T., 1630.

**Methoxymethyl-β-benzoylpropionic acid** (Bentley, Gardner, and Weizmann), 1907, T., 1640.

**2-Methoxy-5-methylbenzylidene-*p*-aminophenol** (Manchot and Palmberg), 1912, A., i, 350.

**2-Methoxy-5-methylbenzylidene-*p*-anisidine** (Manchot and Palmberg), 1912, A., i, 350.

**4-Methoxy-1-methyl-3:5-bistetramethyl*di*aminobenzhydrylbenzene** (Ullmann and Brittner), 1909, A., i, 591.

**3-Methoxy-1-methylbrazanquinone** (Grafmann and v. Kostanecki), 1909, A., i, 251.

**β-Methoxy-3-methyl-α-bromomethylstyrene,** β:5-*di*bromo-6-hydroxy-, and its acetate (Fries and Moskopp), 1910, A., i, 334.

**2-Methoxy-4-methyl-α-bromomethylstyrene,** β:β:3:5-*tetra*bromo- (Fries and Volk), 1910, A., i, 334.

**β-Methoxy-4-methyl-α-bromomethylstyrene,** β:3:5-*tri*bromo-2-hydroxy-, and its methyl ether (Fries and Volk), 1910, A., i, 333.

**3-Methoxy-5-methyl-2-*tri*chloromethylphthalide** (Meldrum), 1911, T., 1716.

**5-Methoxy-3-methyl-2-*tri*chloromethylphthalide** (Meldrum), 1911, T., 1716.

**2-Methoxy-3-methylcinchonic acid,** methyl ester, amide and anilide of (Ornstein), 1907, A., i, 444.

***p*-Methoxy-β-methylcinnamic acid** (Schroeter and Buchholz), 1908, A., i, 170.

**5-Methoxy-2-methyl-coumaran** and **-coumarone** (v. Kostanecki and Lampe), 1908, A., i, 443.

**5-Methoxy-2-methylcoumarilic acid** and its methyl and ethyl esters (v. Kostanecki and Lampe), 1908, A., i, 442.

**2-Methoxy-4-methylcoumarilic acid** and its ethyl ester (Auwers), 1912, A., i, 1010.

**5-Methoxy-2-methylcoumarilyl chloride** (Tambor, Günsberg, Keller, Chanschy-Herzenberg, Rosenknopf, and Lichtenbaum), 1912, A., i, 45.

**4-Methoxy-7-methylcoumarin-3-carboxylic acid,** ethyl ester (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 663.

**4-Methoxy-2-methylcoumarone** (v. Graffenried and v. Kostanecki), 1910, A., i, 630.

**2-Methoxy-4-methylcoumarone** (Auwers), 1912, A., i, 1010.

**3-Methoxy-1-methyl-1′:4′-diacetoxybrazan** (Grafmann and v. Kostanecki), 1909, A., i, 251.

**2-Methoxy-1-methyldihydro-6-pyrimidone,** 4-imino-, 5-oximino-4-imino-, and 4:5-*di*amino- (Engelmann), 1909, A., i, 192.

6(or 7)-**Methoxy-2-methyl-3:4-dihydro-*iso*-quinolinium,** 7(or 6)-hydroxy-, chloride and iodide (Pyman), 1910, T., 278.

**2′-Methoxy-3-methyldiphenylacetamide,** 4-hydroxy- (Bistrzycki, Paulus, and Perrin), 1911, A., i, 869.

**4′-Methoxy-5-methyldiphenylacetamide,** 2-hydroxy-, and its derivatives (Bistrzycki, Paulus, and Perrin), 1911, A., i, 868.

**2′-Methoxy-3-methyldiphenylacetic acid,** 4-hydroxy-, lactone of (Bistrzycki, Paulus, and Perrin), 1911, A., i, 869.

**2′-Methoxy-5-methyldiphenylacetic acid,** 2-hydroxy-, and its derivatives (Bistrzycki, Paulus, and Perrin), 1911, A., i, 869.

**4′-Methoxy-3-methyldiphenylacetic acid,** 4-hydroxy- (Bistrzycki, Paulus, and Perrin), 1911, A., i, 868.

**4′-Methoxy-5-methyldiphenylacetic acid,** 2-hydroxy- (Bistrzycki, Paulus, and Perrin), 1911, A., i, 868.

**4′-Methoxy-3-methyldiphenylacetonitrile,** 4-hydroxy-, and its acetyl derivative (Bistrzycki, Paulus, and Perrin), 1911, A., i, 868.

**1-Methoxy-2:3-methylenedioxybenzene**, 5-nitro-, and 5-amino-, and its hydrochloride and benzoyl derivative (Salway), 1909, T., 1161; P., 160.

**3-Methoxy-4:5-methylenedioxybenzylamine** and its salts (Rügheimer and Ritter), 1912, A., i, 447.

**8-Methoxy-6:7-methylenedioxy-1-benzyl-3:4-dihydro*iso*quinoline** and its hydrochloride and picrate (Salway), 1910, T., 1214.

**6-Methoxy-7:8-methylenedioxy-1-benzyl-3:4-dihydro*iso*quinoline** and its hydrochloride and picrate (Salway), 1910, T., 1215.

**β-3-Methoxy-4:5-methylenedioxybenzyliminopropyl methyl ketone** (Rügheimer and Ritter), 1912, A., i, 447.

**8(5)-Methoxy-6:7-methylenedioxycarbostyril methyl ether** (Salway), 1909, T., 1218.

**3-Methoxy-4:5-methylenedioxycinnamic acid**, and action of nitric acid on, and 2(6)-amino-, methyl ester, and 2(6)-nitro-, and its methyl and ethyl esters (Salway), 1909, T., 1209.

**8-Methoxy-6:7-methylenedioxy-3:4-dihydro*iso*quinoline** and its picrate (Decker), 1912, A., i, 581.

**8(5)-Methoxy-6:7-methylenedioxy-1:2-dihydro-2-quinolone** and its hydrochloride, and reduction products (Salway), 1909, T., 1216.

**3-Methoxy-4:5-methylenedioxy-1-dimethylaminoethylbenzene**, 2-cyano-, and its hydrochloride and methiodide (Freund and Oppenheim), 1909, A., i, 411.

**2-Methoxy-3:4-methylenedioxy-6-β-dimethylaminoethylstilbene**, 2′:4′- and 2′:6′-*di*nitro- and derivatives (Hope and Robinson), 1911, T., 2127, 2129.

**Methoxymethylenedioxy-α-hydrindone** and its oxime (Salway), 1909, T., 1210.

**3-Methoxy-4:5-methylenedioxy-1-β-methylaminoethylbenzene**, 2-cyano-, and its salts (Rabe and McMillan), 1911, A., i, 77.

**8(5)-Methoxy-6:7-methylenedioxy-1-methyl-1:2-dihydro-2-quinolone** (Salway), 1909, T., 1218.

**6-Methoxy-4:5-methylenedioxy-1-methyl-2-dimethylaminoethylbenzene** (Finzi and Freund), 1912, A., i, 898.

**Methoxymethylenedioxyphenylaminoacetone** and its picrate and **-nitroacetone** (Rimini), 1905, A., i, 199.

**β-3-Methoxy-4:5-methylenedioxyphenylethylamine**, and its hydrochloride and benzoyl derivative (Salway), 1910, T., 1212.

**8-Methoxy-6:7-methylenedioxy-1-phenyl-2-methyl-1:2-dihydro*iso*quinoline** (Freund and Lederer), 1911, A., i, 910.

**β-3-Methoxy-4:5-methylenedioxyphenylpropionamide** (Salway), 1910, T., 1211.

**7-Methoxy-5:6-methylenedioxy-2-piperonylidene-1-hydrindone** (Perkin, Robinson, and Thomas), 1909, T., 1983.

**β-3-Methoxy-4:5-methylenedioxypropionic acid** (Salway), 1909, T., 1209.

**Methoxy-3′:4′-methylenedioxystilbenes**, 2- and 4- (v. Kostanecki and Sulser), 1905, A., i, 352.

**Methoxy-3′:4′-methylenedioxystilbene-β-carboxylic acids**, 2-, 3-, and 4- (v. Kostanecki and Sulser), 1905, A., i, 352.

**3-Methoxy-4:5-methylenedioxystyrene**, ω-2(6)-*di*nitro- (Salway), 1909, T., 1214.

**2-Methoxy-3:4-methylenedioxy-6-vinylstilbene**, 2′:4′-*di*nitro- (Hope and Robinson), 1911, T., 2130.

**Methoxymethylenephthalide** (Gabriel), 1907, A., i, 215.

**7-Methoxy-5-methylflavone** (Tambor), 1908, A., i, 350.

**Methoxy-7-methylflavones**, 2′-, 3′-, and 4′-, 5-hydroxy-, and their sodium salts (Tambor), 1908, A., i, 358.

**α-Methoxymethylglutaric acid** and its barium salt (Simonsen), 1908, T., 1783.

**α-Methoxy-1-methyl*cyclo*hexyl-4-malonic acid**, ethyl ester, and potassium salt (Hope and Perkin), 1909, T., 1368.

**1-Methoxy-1-methyl-2-hydrindone**, 3:3-*di*chloro-5-bromo- (Fries and Hempelmann), 1909, A., i, 810.

**Methoxymethylindole** (Leonardi and de Franchis), 1903, A., i, 787.

**β-Methoxymethylmalonic acid**, ethyl ester, synthesis and reactions of (Simonsen), 1908, T., 1780; P., 212.

**Methoxymethylmenthol** (Chemische Fabrik auf Aktien vorm. E. Schering), 1912, A., i, 479.

**1-Methoxy-5-methyl-2-methylenecoumaran**, 1:4:6-*tri*bromo- (Fries and Volk), 1910, A., i, 333.

**2-Methoxy-1-methylnaphthalene**, 6-bromo- (Bargellini and Silvestri), 1907, A., i, 914.

**2-Methoxy-1-methylnaphthalene-6-phthaloylic acid** (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1912, A., i, 563.

**6-Methoxy-5-methyl-2-naphthylphenylmethane-2-carboxylic acid** (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1912, A., i, 563.

**Methoxymethylphenylglyoxylic acids,** 2:4- and 4:2- (Eykman), 1904, A., i, 665.

**5-Methoxy-3-methylphthalic acid** and its anhydride (Meldrum), 1911, T., 1718.

**3-Methoxy-5-methylphthalic acid** and its anhydride (Meldrum), 1911, T., 1720.

**5-Methoxy-3-methylphthalide** (Meldrum), 1911, T., 1718.

**3-Methoxy-5-methylphthalide** (Meldrum), 1911, T., 1720.

**5-Methoxy-3-methylphthalide-2-carboxylic acid** and its calcium salt (Meldrum), 1911, T., 1717.

**3-Methoxy-5-methylphthalide-2-carboxylic acid** and its calcium salt (Meldrum), 1911, T., 1719.

**3-Methoxy-1-methyl-4-*iso*propylbenzene** (Guillaumin), 1910, A., i, 375.

**β-Methoxymethyl-β-*iso*propylmalonic acid** and its ethyl ester and barium salt, synthesis of (Simonsen), 1908, T., 1787; P., 212.

**3-Methoxy-2-methyl-4-pyridone** (Peratoner and Tamburello), 1905, A., i, 808.

**2-Methoxy-4-methylpyrimidine,** 6-hydroxy-, and its 5-ethyl derivative (Bruce), 1904, A., i, 574.

***w*-Methoxymethylpyromucic acid** (Cooper and Nuttall), 1911, T., 1199; P., 134.

**4-Methoxy-2-methylquinazoline,** *tri*chloro- (Bogert and May), 1909, A., i, 330.

**6-Methoxy-1-methylquinolan,** 4-cyano- (Kaufmann, Peyer, and Widmer), 1912, A., i, 651.

**8-Methoxy-1-methylquinoline** (Fischer, Berckhemer, and Ulbricht), 1903, A., i, 53.

**4-Methoxy-2-methylquinoline.** See 2-Methylkynurine, *O*-methyl ether.

**6-Methoxy-4-methylquinoline,** synthesis of (Pictet and Misner), 1912, A., i, 650.

**6-Methoxy-2-methylquinoline-6-methylquinolinecyanine,** methiodide (Farbwerke vorm. Meister, Lucius, & Brüning), 1906, A., i, 716.

**6-Methoxy-1-methyl-2-quinolone** and 5-bromo- (Howitz and Bärlocher), 1903, A., i, 279.

**6-Methoxy-1-methyl-2-quinolone,** 5-nitro- (Decker, Engler, and Rumine), 1909, A., i, 513.

**8-Methoxy-1-methyl-2-quinolone,** bromo-derivatives (Howitz and Witte), 1905, A., i, 470.

**Methoxymethylsantalol** (Chemische Fabrik auf Aktien vorm. E. Schering), 1912, A., i, 479.

**4′-Methoxy-6-methyl-2-stilbazole** and its salts (Proske), 1909, A., i, 414.

**Methoxymethylsuberaneoxime** (Wallach), 1906, A., i, 371.

**α-Methoxy-α-methylsuccinic acid,** ethyl ester (Hope), 1912, T., 907.

**Methoxymethyltetrahydroanthraquinone,** *di*hydroxy- (Tschirch and Cristofoletti), 1905, A., ii, 852.

**2-Methoxy-1-methyltetrahydro-6-pyrimidone,** 4-imino- (Farbenfabriken vorm. F. Bayer & Co.), 1909, A., i, 527.

**8-Methoxy-2-methyltetrahydro*iso*quinoline,** 6- and 7-hydroxy- (Pyman and Remfry), 1912, T., 1606; P., 228.

6(or 7)-**Methoxy-2-methyltetrahydro*iso*quinolone,** 7(or 6)-hydroxy-, and its sodium salt (Pyman), 1910, T., 271.

**Methoxymethylthioldiphenylthiodiazoline** (Busch, Kamphausen, and Schneider), 1903, A., i, 532.

**Methoxymethylthiolphenyl-*p*-tolylthiodiazoline** (Busch and Blume), 1903, A., i, 535.

**4-Methoxy-2-methylthiolpyrimidine,** 6-amino- (Johnson and Johns), 1905, A., i, 836.

**3-Methoxymethyl-*p*-toluic acid** (Guillaumin), 1910, A., i, 375.

**β-Methoxymethyl*iso*valeric acid** and its ethyl ester and silver salt, synthesis of (Simonsen), 1908, T., 1788.

**Methoxynaphthacenequinone,** *tri*hydroxy- (Bentley, Friedl, and Weizmann), 1907, T., 1592; P., 215.

**5-Methoxynaphthacenequinone,** 1-hydroxy- (Bentley, Friedl, Thomas, and Weizmann), 1907, T., 425.

8(or 9)-**Methoxynaphthacenequinone,** 1-hydroxy- (Bentley, Friedl, Thomas, and Weizmann), 1907, T., 423.

**2-Methoxynaphthacinchonic acid** (Ciusa), 1907, A., i, 853.

**Methoxy-α-naphthaflavonols,** 3′- and 4′-, and their sodium salts and acetates (v. Kostanecki), 1908, A., i, 359.

**Methoxy-α-naphthaflavanones,** 3′- and 4′, and their isonitroso-derivatives (v. Kostanecki), 1908, A., i, 359.

**α-Methoxynaphthafluorenone** (Ullmann and Denzler), 1907, A., i, 143.

**Methoxynaphthaldazine** (Pascal and Normand), 1912, A., i, 147.

**1-Methoxy-2-naphthaldehyde** (Friedländer), 1908, A., i, 373; (Bezdzik and Friedländer), 1909, A., i, 416.

**4-Methoxy-2-naphthaldehyde,** 1-hydroxy- (Friedländer), 1908, A., i, 373; (Bezdzik and Friedländer), 1909, A., i, 416.

**5-Methoxy-2-naphthaldehyde,** 1-hydroxy- (Bezdzik and Friedländer), 1909, A., i, 417.

**Methoxy-1-naphthaldehydes,** 2- and 4-, and their azines, synthesis of (Gattermann), 1908, A., i, 33.

**Methoxynaphthalene.** See Naphthyl methyl ether.

**1-Methoxynaphthalene-4-sulphonic acid,** sodium salt (Voroschtsoff), 1911, A., i, 341; 1912, A., i, 145.

**2-Methoxy-1:4-naphthaquinone,** and its oxime, semicarbazone, and 4-methylnitromethide (Sachs, Berthold, and Zaar), 1907, A., i, 427.

**2-Methoxynaphthaxanthone** (Ullmann and Kipper), 1905, A., i, 597.

**Methoxy*peri*naphth-hydrindone** (Barger and Starling), 1911, T., 2030; P., 259.

**2-Methoxy-α-naphthoic acid** (Bodroux), 1903, A., i, 420; 1904, A., i, 167.

α- and **β-Methoxynaphthoic acids,** menthyl esters of (Cohen and Dudley), 1910, T., 1747.

**β-Methoxy-α-** and **-β-naphthoic acids,** methyl esters (Werner and Seybold), 1904, A., i, 1013.

**4-Methoxy-α-naphthol** (Badische Anilin- & Soda-Fabrik), 1906, A., i, 951.

**1-Methoxy-β-naphthol** (Bezdzik and Friedländer), 1909, A., i, 416.

**3-Methoxy-β-naphthol** and its acetyl derivative (Baezner, Gardiol, and Gueorguieff), 1906, A., i, 700.

**1-Methoxy-2-β-naphthoylbenzoic acid** and 6-nitro-, methyl esters (Orchardson and Weizmann), 1906, T., 120.

3(or 6)-**Methoxy-2-β-naphthoylbenzoic acid,** 1′-hydroxy- (Bentley, Friedl, Thomas, and Weizmann), 1907, T., 420.

**β-2-Methoxynaphthylacrylic acid** (Barger and Starling), 1911, T., 2032; P., 258.

**2-Methoxy-1-naphthylcarbinyl-amine,** and **-chloroacetamide** (Einhorn), 1908, A., i, 613.

**2-Methoxy-4-naphthylcyanoacetic acid,** 1-hydroxy-, methyl ester, and its eurhodole and semicarbazone (Sachs, Berthold, and Zaar), 1907, A., i, 427.

1-*o*- and -*p*-**Methoxy-2-naphthyl ethyl ethers** and their hydrochlorides (Charrier and Ferreri), 1912, A., i, 813.

**2-Methoxy-α-naphthylideneacetylacetone** (Helbronner), 1903, A., i, 764.

**β-Methoxynaphthylidenebisphenylmethylpyrazolone** (Mundici), 1909, A., i, 720.

**β-Methoxynaphthylidenephenylmethylpyrazolone** (Mundici), 1909, A., i, 720.

**β-2-Methoxynaphthylpropionic acid** (Barger and Starling), 1911, T., 2030; P., 258.

**6-Methoxynicotinic acid,** methyl ester (Meyer), 1906, A., i, 108.

**α-Methoxy-α-nitromethylphthalide** (Gabriel), 1903, A., i, 345.

**3-Methoxy*iso*oxazole-5-propionic acid** and its methyl ester and nitro-derivative (Thiele and Landers), 1909, A., i, 876.

**1-Methoxyoxindole** (Reissert), 1909, A., i, 52.

**α-Methoxypentan-δ-ol,** εεε-*tri*chloro- (Hamonet), 1906, A., i, 133.

**α-Methoxypentan-β-one** (Gauthier), 1909, A., i, 354.

**β-Methoxypentan-γ-one** (Gauthier), 1909, A., i, 354.

**Methoxy*cyclo*pentenedione,** *tri*bromo- (Jackson and Flint), 1910, A., i, 178.

*p*-**Methoxyphenacyldialuric acid** and its acetyl and benzoyl derivatives (Kühling and Schneider), 1909, A., i, 424.

*p*-**Methoxyphenacyl*iso*hydantoic acid** (Kühling and Schneider), 1909, A., i, 424.

**4-Methoxyphenacyl-lævulic acid** and 2-hydroxy- (Courant and v. Kostanecki), 1907, A., i, 75.

*p*-**Methoxyphenacyltartronuric acid** and its lead salt (Kühling and Schneider), 1909, A., i, 424.

**3-Methoxyphenanthrene,** amino-4-hydroxy-, triacetyl derivative of, and its oxidation (Vongerichten and Weilinger), 1905, A., i, 542.

4-hydroxy- (*methylmorphol*) and its **-9-carboxylic acid** (Pschorr and Vogtherr), 1903, A., i, 183.

**3-Methoxyphenanthrene,** 4-hydroxy- (*methylmorphol*), synthetical base from, and its behaviour towards reagents which decompose methylmorphimethine (Knorr), 1905, A., i, 813.

*o*-**Methoxyphenol.** See Guaiacol.

**5-Methoxyphenol.** See Resorcinol, 1-methyl ether.

**5-Methoxyphenol,** 3-hydroxy-. See Phloroglucinol, 1-methyl ether.

**1-Methoxy-1:2-phenonaphthacridine,** 10-amino- (Baezner, Gardiol, and Gueorguieff), 1906, A., i, 700.

*o*-**3-Methoxyphenoxybenzoic acid** (v. Baeyer, Aickelin, Diehl, Hallensleben, and Hess), 1910, A., i, 250.

*m*-**Methoxy-β-phenoxycinnamic acid** and its ethyl ester (Ruhemann), 1903, T., 1134; P., 202.

*m*-**Methoxyphenoxyfumaric acid,** ethyl ester (Ruhemann), 1903, T., 1132; P., 202.

β-*m*-**Methoxyphenoxypropionic acid** (Tschitschibabin and Nikitin), 1911, A., i, 1007; (Perkin and Robinson), 1912, P., 7.

*m*-**Methoxyphenoxystyrene** (Ruhemann), 1903, T., 1134; P., 202.

**Methoxyphenyl ethyl carbonate,** *o*-amino-, and its acetyl derivative and carbamide, and *o*-nitro- (A. and L. Lumière and Perrin), 1905, A., i, 588.

  sulphide, nitro- (Blanksma), 1904, A., i, 577.

*o*-**Methoxyphenyl hydrogen sulphate** (A. and L. Lumière and Perrin), 1904, A., i, 157.

*p*-**Methoxyphenyl benzyl sulphide** (Taboury), 1905, A., i, 644.

*p*-**Methoxyphenylacetaldehyde** and its semicarbazone (Tiffeneau), 1907, A., i, 405.

α-*p*-**Methoxyphenylacetamide,** α-amino-, and its derivatives (Clarke and Francis), 1911, T., 323.

**2-Methoxyphenylacetic acid,** 5-bromo-, and its sodium salt (Knorr and Hörlein), 1909, A., i, 919.

**3-Methoxyphenylacetic acid** (Pschorr, Dickhäuser, and Zeider), 1912, A., i, 766.

**3-Methoxyphenylacetic acid,** 6-bromo- (Pschorr and Koch), 1912, A., i, 767.

**3-Methoxyphenylacetic acid,** 6-bromo-4-hydroxy-, and its derivatives and 4-hydroxy-, ethyl ester (Pschorr, Selle, Koch, Stoof, and Treidel), 1910, A., i, 776.

*p*-**Methoxyphenylacetonitrile,** α-amino-, and its hydrochloride (Aloy and Rabaut), 1910, A., i, 558.

ω-**Methoxyphenylacetyl chloride** (Staudinger and Kupfer), 1911, A., i, 641.

*p*-**Methoxyphenylacetylene** (Kunckell and Eras), 1903, A., i, 413.

*m*-**Methoxyphenylacetylglycollic acid,** *p*-hydroxy-, ethyl ester (Guyot and Gry), 1910, A., i, 41.

**5-*p*-Methoxyphenylacridine,** 3-nitro- (Ullmann and Ernst), 1906, A., i, 206.

**9-Methoxy-5-phenylacridine,** 3-nitro- (Ullmann and Ernst), 1906, A., i, 206.

β-**Methoxy-β-phenylacrylic acid,** α-cyano-, methyl ester (Schmitt), 1903, A., i, 399.

*p*-**Methoxyphenyl** *p*-**aldehydostyryl ketone** and its phenylhydrazone (v. Lendenfeld), 1907, A., i, 222.

γ-*o*-**Methoxyphenylaminoacetoacetic acid,** ethyl ester (Benary), 1908, A., i, 601.

*p*-**Methoxyphenyl-aminoacetone,** hydrochloride and picrate of, and **-nitroacetone** (Rimini), 1905, A., i, 198.

*p*-**Methoxyphenylaminocamphor** (Forster and Thornley), 1909, T., 952.

α-*o*-**Methoxyphenyl-2-amino-** and **-2-nitro-3:4-dimethoxycinnamic acids** (Pschorr and Busch), 1907, A., i, 636.

*p*-**Methoxyphenyl-2-amino-** and **-2-nitro-3:4-dimethoxycinnamic acids** and their salts (Pschorr, Seydel, and Stöhrer), 1903, A., i, 167.

*p*-**Methoxyphenyl-2-amino-3-hydroxy-4-methoxycinnamic acid** (Pschorr, Seydel, and Stöhrer), 1903, A., i, 167.

η-**Methoxy-α-phenyl-η-*p*-anisyl-$\Delta^{\alpha\gamma}$-heptadien-ε-one,** ζ-bromo-, and γζ-*di*bromo- (Bauer and Dieterle), 1911, A., i, 881.

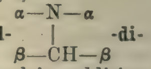
η-**Methoxy-α-phenyl-η-anisyl-$\Delta^{\alpha\gamma}$-heptadien-ε-onephenylhydrazone,** ζ-bromo-, and γδζ-*tri*bromo- (Bauer and Dieterle), 1911, A., i, 921.

η-**Methoxy-α-phenyl-η-*p*-anisyl-$\Delta^{\alpha}$-hepten-ε-one,** γδζ-*tri*bromo- (Bauer and Dieterle), 1911, A., i, 882.

**Methoxyphenylanthranilic acids.** See Methoxydiphenylamine-2-carboxylic acids.

**4-Methoxy-2-phenylbenzopyranol(1:4)** salts (Perkin, Robinson, and Turner), 1908, T., 1111.

2-*p*-**Methoxyphenyl-1:3-benzoxazone** and its acetyl derivative (Keane and Nicholls), 1907, T., 268 ; P., 36.
*m*-**Methoxyphenylbenzoylglycollic acid,** *p*-hydroxy-, ethyl ester (Guyot and Gry), 1910, A., i, 41.
*o*-**Methoxyphenylbenzylmethylallylammonium** salts (Wedekind and Fröhlich), 1907, A., i, 410.
    iodide (Wedekind and Fröhlich), 1906, A., i, 162.
*p*-**Methoxyphenylbenzylmethylallylammonium** salts (Fröhlich and Wedekind), 1907, A., i, 411.
*p*-**Methoxyphenylcamphoramic acid** (Piutti, Leone, and D'Emilio), 1910, A., i, 675.
*p*-**Methoxyphenylcamphorimide** (Piutti, Leone, and D'Emilio), 1910, A., i, 675.
*o*-**Methoxyphenylcarbamic acid,** ethyl ester (Pschorr and Einbeck), 1905, A., i, 590.
*o*-**Methoxyphenylcarbithionic acid.** See *o*-Methoxybenzoic acid, *di*thio-.
*p*-**Methoxyphenylcarbithionic acid.** See Anisic acid, *di*thio-.
*p*-**Methoxyphenylchloroacetylene** (Kunckell and Eras), 1903, A., i, 413.
*p*-**Methoxyphenyl*tri*chloromethylcarbinol** and its acetate (Dinesmann), 1905, A., i, 645.
*o*-**Methoxyphenylcitraconamic acid** (Piutti and Allegri), 1910, A., i, 674.
*p*-**Methoxyphenylcitraconamic acid** (Piutti, Pagniello, and Marciano), 1910, A., i, 672.
*o*-**Methoxyphenylcitraconimide** (Piutti and Allegri), 1910, A., i, 675.
*p*-**Methoxyphenylcitraconimide** (Piutti, Pagniello and Marciano), 1910, A., i, 672.
*α*-*p*-**Methoxyphenylcoumaric acid** (Stoermer and Friemel), 1911, A., i, 633.
**5-Methoxy-2-phenylcoumarilic acid** (Motylewski) 1909, A., i, 822.
**4′-Methoxy-*β*-phenylcoumarin,** 4-hydroxy- and its acetyl derivative (Bargellini and Leonardi), 1911, A., i, 902.
**5-Methoxy-2-phenylcoumarone** (Motylewski), 1909, A., i, 822.
*o*-**Methoxyphenyldiazoaminobenzene** (Vignon and Simonet), 1904, A., i, 1065.
*α*-*p*-**Methoxyphenyl-3-diazo-2-oxy-4-methoxycinnamic acid** (Pschorr, Seydel, and Stöhrer), 1903, A., i, 168.
7-*p*-**Methoxyphenyldihydro-*αβ*-phenonaphthacridine,** 10-hydroxy-, and its acetyl derivative (Pope and Howard), 1910, T., 976 ; P., 88.
*p*-**Methoxyphenyl-$\Delta^{1:3}$-and-$\Delta^{2:5}$-dihydrophthalimides** (Abati and Contaldi), 1906, A., i, 959.
4-*m*-**Methoxyphenyldihydro-6-pyridone,** 3:5-*di*cyano-2-*p*-*di*hydroxy-, ammonium salt (Piccinini), 1904, A., i, 919.
3-*p*-**Methoxyphenyl-7:8-dimethoxy-2-carbostyril** (Pschorr, Seydel, and Stöhrer), 1903, A., i, 167.
*p*-**Methoxyphenyl dimethylaminomethyl ketone** and its hydriodide (Voswinckel), 1912, A., i, 443.
*m*-**Methoxyphenyldimethylcarbinol** (Béhal and Tiffeneau), 1904, A., i, 742.
*α*-**Methoxyphenyl-*δδ*-dimethylfulgenic acids,** *o*- and *p*-, and their fulgides (Stobbe and Lenzner), 1906, A., i, 278.
4-*p*-**Methoxyphenyl-1:1-dimethyl*cyclo*hexane-2:6-dione-3:5-dicarboxylic acid,** ethyl ester (Dieckmann and Kron), 1908, A., i, 389.



$$\text{7-}p\text{-Methoxyphenyl-}\begin{array}{c}\alpha\text{—N—}\alpha\\ |\\ \beta\text{—CH—}\beta\end{array}\text{-di-}$$

**naphthacridine** and its additive salts (Senier and Austin), 1907, T., 1237 ; P., 186.
*p*-**Methoxyphenyldinaphthaquinoxanthenol** chloride, hydrochloride (Gomberg and Cone), 1910, A., i, 57.
*p*-**Methoxyphenyldinaphthaxanthenol,** salts of (Gomberg and Cone), 1910, A., i, 57.
*α*-**Methoxy-*α*-phenylethane,** nitro- and bromonitro-derivatives of (Thiele and Haeckel), 1903, A., i, 160.
    *β*-nitro- (Meisenheimer and Heim), 1905, A., i, 269.
*p*-**Methoxy-*α*-phenylethane,** and *αβ*-*di*bromo- and *α*-chloro-*β*-bromo- (Tutin, Caton, and Hann), 1909, T., 2124.
    *β*-3:5-*tri*nitro-*α*-hydroxy- (Remfry), 1911, T., 285 ; P., 21.
*β*-**Methoxy-*β*-phenylethane,** *α*-nitro- (Rosenmund), 1912, A., i, 449.
*p*-**Methoxyphenylethyl** acetate (Tiffeneau), 1907, A., i, 406.
*p*-**Methoxyphenylethyl alcohol** (Aktien-Gesellschaft für Anilin-Fabrikation), 1911, A., i, 857.
    and its phenylurethane (Grignard), 1905, A., i, 594.

*m*-**Methoxyphenylethylamine**, *α-p*-hydroxy-, and its hydrochloride and benzoyl derivatives (Moore), 1911, T., 418; P., 42.

*α-p*-**Methoxyphenylethylamine** (*α-anisylethylamine*) and its derivatives (Betti and del Rio), 1912, A., i, 347.

and its salts (Busch and Leefhelm), 1908, A., i, 153.

and its carbonate (Rosenmund), 1910, A., i, 106.

and its hydrochloride (Rosenmund), 1910, A., i, 241.

*β-p*-**Methoxyphenylethylamine** and its hydrochloride (Barger and Walpole), 1909, T., 1724; P., 229.

*β*-**Methoxy-*β*-phenylethylamine** and *β*-hydroxy-, and their hydrochlorides (Rosenmund), 1912, A., i, 449.

**2-Methoxy-5-phenyl-5-ethylbarbituric acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1025.

**5-*p*-Methoxyphenyl-5-ethylbarbituric acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1025.

*p*-**Methoxyphenylethylcarbinol** and its ether (Hell and Hofmann), 1905, A., i, 58; (Klages), 1905, A., i, 344, 645; (Hell), 1905, A., i, 436.

**Methoxyphenylethylcarbinols**, *o*- and *p*- (Hell and Hofmann), 1905, A., i, 435.

**9-*p*-Methoxyphenylfluorene** and its 9-carboxylic acid (Bistrzycki and v. Weber), 1910, A., i, 743.

**3-Methoxy-9-phenylfluorone** and its chloride and platinichloride (Kehrmann, Dengler, and Scheunert), 1909, A., i, 249.

*p*-**Methoxyphenylfumaric diamide** (Piutti), 1910, A., i, 23.

**3-Methoxyphenylglycine-2-carboxylamide** (Friedländer, Bruckner, and Deutsch), 1912, A., i., 319.

**5-Methoxyphenylglycine-2-carboxylic acid** (Friedländer, Bruckner, and Deutsch), 1912, A., i, 319.

*o*-**Methoxyphenylglycinyl ethyl urethane** (Frerichs and Breustedt), 1903, A., i, 18.

*p*-**Methoxyphenylglyoxylamide** (Mauthner), 1909, A., i, 161.

*γ-p*-**Methoxyphenylhexan *ε*-one** and its oxime (Kohler), 1907, A., i, 1052.

*p*-**Methoxyphenyl*cyclo*hexylcarbinol** and its chloride (Schmidlin and v. Escher), 1912, A., i, 437.

**3-*p*-Methoxyphenylhydantoin** (Frerichs and Breustedt), 1903, A., i, 18.

**4-*p*-Methoxyphenylhydantoin** (Clarke and Francis), 1911, T., 324.

**4-*p*-Methoxyphenylhydantoin**, 5-thio- (Johnson and Chernoff), 1912, A., i, 811.

**1-*p*-Methoxyphenylhydrocotarnine** (Freund and Reitz), 1906, A., i, 601.

*α*-**Methoxyphenylhydrocoumaric acid** (Stoermer and Friemel), 1911, A., ii, 632.

**4-Methoxyphenyl 2-hydroxystyryl ketone** (*2-hydroxy-4′-methoxychalkone*) and its derivatives (Zwayer and v. Kostanecki), 1908, A., i, 444.

*α-o*-**Methoxyphenyl-*o*-hydroxy-*p*-tolylacetic acid**, lactone of (Stoermer and Friemel), 1912, A., i, 46; (Stockmann), 1912, A., i, 862.

*β-o*-**Methoxyphenyl-*αβ-di-p*-hydroxy-*o*-tolylpropionic acid** and its derivatives (Stoermer and Friemel), 1912, A., i, 45.

*p*-**Methoxyphenyliminocamphor** (Forster and Thornley), 1909, T., 952.

*o*-**Methoxyphenylitaconamic acid** (Piutti and Allegri), 1910, A., i, 674.

*p*-**Methoxyphenylitaconamic acids** and their silver salts (Piutti, Foa, and Rossi), 1910, A., i, 673.

*p*-**Methoxyphenylitacondiamide** (Piutti, Foa, and Rossi), 1910, A., i, 674.

*o*-**Methoxyphenylitaconimide** (Piutti and Allegri), 1910, A., i, 675.

*p*-**Methoxyphenylitaconimide** (Piutti, Foa, and Rossi), 1910, A., i, 673.

*o*-**Methoxyphenylmaleinamic acid** (Piutti and Allegri), 1910, A., i, 675.

*p*-**Methoxyphenylmaleinamic acid** (Piutti), 1910, A., i, 23.

*p*- and *s-p*-**Methoxyphenylmaleimide** (Piutti), 1910, A., i, 23.

**Methoxyphenyl-*m*-meconine**, hydroxy- (Perkin and Robinson), 1907, P., 292.

*p*-**Methoxyphenylmesacondiamide** (Piutti, Pagniello, and Marciano), 1910, A., i, 673.

*p*-**Methoxyphenyl-*p*-methoxystyryl*di*chloromethane**, and its salts and derivatives (Straus, Krier, and Lutz), 1910, A., i, 567.

*o*-**Methoxyphenylmethylcarbinol** (Pschorr and Einbeck), 1905, A., i, 590.

**3-Methoxyphenylmethylcarbinol**, 4-hydroxy-. See Apocynol.

**2-*o*-Methoxyphenyl-5-methylcoumaran** (Stoermer and Friemel), 1912, A., i, 46.

**2-*o*-Methoxyphenyl-5-methylcoumaran-1-carboxylic acid** and its derivatives (Stoermer and Friemel), 1912, A., i, 45.

**4-*o* Methoxyphenyl-7-methylcoumarin** (Stoermer and Friemel), 1912, A., i, 45.

**2-*o*-Methoxyphenyl-5-methylcoumarone** (Stoermer and Friemel), 1912, A., i, 46.

**5-*p*-Methoxyphenyl-3-methyldihydroacridine**, 8-hydroxy-, and its acetyl derivative (Pope and Howard), 1910, T., 975.

**10-Methoxy-7-phenyl-9-methyl-7:12-dihydropheno-αβ-naphthacridine** (Ullmann and Fitzenkam), 1906, A., i, 45.

***p*-Methoxyphenyl methyl diketone**, and its *amphi*-dioxime (Borsche), 1907, A., i, 327.

**β-*p*-Methoxyphenyl-β-4-methyl*cyclo*hexan-2-onylpropiophenones** (Cruikshanks), 1912, A., i, 785.

**5-*m*-Methoxyphenyl-3-methyl-$\Delta^2$-*cyclo*hexenone-4:6-dicarboxylic acid**, *p*-hydroxy-, ethyl ester (Knoevenagel and Albert), 1905, A., i, 63.

**4-*o*-Methoxyphenyl-7-methylhydrocoumarin**, 3-bromo- (Stoermer and Friemel), 1912, A., i, 45.

**10-Methoxy-7-phenyl-9-methylpheno-αβ-naphthacridine** and its additive salts (Ullmann and Fitzenkam), 1906, A., i, 45.

**3-Methoxy-1-phenyl 5-methylpyrazole** (ψ-3-*antipyrine*) (Michaelis and Meyer), 1905, A., i, 378.

**4-Methoxy-3-phenyl-6-methylquinoline.** See 3-Phenyl-6-methylkynurine, *O*-methyl ether.

**4′-Methoxy-9-phenyl-2-methylxanthen**, 6-hydroxy-, and its acetyl derivative (Pope and Howard), 1910, T., 974.

***p*-Methoxyphenyl-β-naphthacinchonic acid**, *o*- and *m*-hydroxy- (Pauly, v. Buttlar, and Lockermann), 1911, A., i, 787.

**11-*p*-Methoxyphenyl-β-naphthaxanthen**, 8-hydroxy-, and its acetyl derivative (Pope and Howard), 1910, T., 975.

α-*o*- and -*p*-**Methoxyphenylnaphthylamine** (Knoll & Co.), 1912, A., i, 345.

**β-*p*-Methoxyphenyl-β-α-naphthylpropionic acid** and its salts and toluidide (Fosse), 1906, A., i, 975; 1907, A., i, 136.

*p*-**Methoxyphenyl-2-nitro-3-acetoxy-4-methoxycinnamic acid** (Pschorr, Seydel, and Stöhrer), 1903, A., i, 167.

**4′-Methoxyphenyl-4:6-*di*nitro-*m*-tolylamine** (Reverdin, Dresel, and Delétra), 1904, A., i, 580.

**2-Methoxy-3-phenyl*iso*oxazolidone** (Posner), 1906, A., i, 955.

*o*- and *m*-**Methoxyphenyl*iso*oxazolone** (Wahl), 1909, A., i, 262.

**2-*p*-Methoxyphenylperimidine** and its hydrochloride (Sachs and Steiner), 1909, A., i, 970.

**4-*p*-Methoxyphenyl-6-phenyl-2-methylpyridine**, 3-cyano- (v. Meyer and Irmscher), 1908, A., i, 911.

**3-Methoxyphenyl-1-phenyl*iso*oxazole** (Watson), 1904, T., 1326; P., 181.

**5-Methoxyphenyl-3-phenylpyrazole** (Moureu and Brachin), 1903, A., i, 581.

*o*-**Methoxyphenylphthalamic acid** (Piutti and Allegri), 1910, A., i, 674.

*p*-**Methoxyphenyl-phthalamic acid, -phthalimide, -hydrophthalamic acid, and -hydrophthalimide** (Piutti and Abati), 1903, A., i, 424.

*p*-**Methoxyphenyl*iso*phthaldiamide** (Piutti, Pugliese, and Selvaggi), 1910, A., i, 675.

**4-Methoxyphenylphthalide**, 2-hydroxy- (Perkin and Robinson), 1908, T., 511.

*o*-**Methoxyphenylphthalimide** (Piutti and Allegri), 1910, A., i, 675.

**β-*p*-Methoxyphenylpropaldehyde** and its dimeric form, preparation of (Balbiano), 1908, A., i, 901.
  and its semicarbazone (Balbiano and Paolini), 1906, A., i, 186.

**β-Methoxy-α-phenylpropane**, α-hydroxy- (Mameli and Brocca), 1909, A., i, 715.

**γ-*p*-Methoxyphenylpropane-αβ-diol** (Daufresne), 1908, A., i, 19.

**γ-*p*-Methoxyphenylpropane-αγ-diol** (*anethoglycol*) and its acetates (Varenne and Godefroy), 1905, A., i, 282.

**γ-*p*-Methoxyphenylpropane-βγ-diols** (*γ-p-methoxyphenyl-βγ-propylene glycols*), stereoisomeric (Balbiano, de Conno, and Paolini), 1907, A., i, 522.

*p*-**Methoxyphenylpropionamide** (Barger and Walpole), 1909, T., 1724; P., 229; (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 629.

*p*-**Methoxy-β-phenylpropionhydroxamoxime hydrate**, β-hydroxylamino- (Posner), 1912, A., i, 455.

*p*-**Methoxy-α-phenylpropionic acid,** α-hydroxy- (p-*methoxyatrolactic acid*), and atrolactic acid, comparative study of the dehydration of (Bougault), 1908, A., i, 340.

**β-2-Methoxyphenylpropionic acid,** methyl ester and hydrazide (Pschorr and Einbeck), 1905, A., i, 590.

**β-2-Methoxyphenylpropionic acid,** αβ-*di*bromo-5-nitro-, methyl ester (Clayton), 1910, T., 2110.

**β-3-Methoxyphenylpropionic acid,** 5-hydroxy-, and its amide (Salway), 1910, T., 2417.
  4:6-*di*hydroxy-, and its lactone (Moore), 1911, T., 1047; P., 119.

**β-4-Methoxyphenylpropionic acid,** α-amino-*m*-bromo- (Johnson and Bengis), 1912, A., i, 809.
  α-bromo- (Friedmann and Gutmann), 1910, A., i, 741.

**β-Methoxy-β-phenylpropionic acid,** and its methyl ester (Schrauth, Schoeller, and Struensee), 1911, A., i, 641.

*o*-, *m*-, and *p*-**Methoxy-β-phenylpropionic acids,** β-amino- (Posner), 1912, A., i, 455.

*p*-**Methoxyphenylpropionyl chloride** (Barger and Walpole), 1909, T., 1724.

**3-Methoxyphenyl-*n*-propyl alcohol,** α-2-hydroxy- (Douetteau), 1912, A., i, 620.

**β-*p*-Methoxyphenylpropyl alcohol,** γ-chloro- (Riedel), 1907, A., i, 920.

*p*-**Methoxyphenyl*iso*propylamine,** and its hydrochloride (Mannich and Jacobsohn), 1910, A., i, 167; (Rosenmund, Mannich, and Jacobsohn), 1912, A., i, 443.

**4-Methoxyphenyl 4-*iso*propylstyryl ketone,** 2-hydroxy- (v. Kostanecki and Tobler), 1907, A., i, 952.

*p*-**Methoxyphenyl*iso*propyltrimethylammonium iodide** (Rosenmund), 1911, A., i, 34.

*p*-**Methoxyphenylpyrocinchonamic acid,** *p*-anisidine salt of (Piutti and Abati), 1910, A., i, 674.

**4-Methoxyphenylpyrocinchonimide** (Piutti and Abati), 1910, A., i, 674.

**3-Methoxyphenylpyruvic acid,** 6-bromo- (Pschorr and Koch), 1912, A., i, 766.

**4-Methoxyphenylpyruvic acid** (Wakeman and Dakin), 1911, A., ii, 417.
  and its phenylhydrazone and condensation with benzaldehyde (Erlenmeyer and Wittenberg), 1905, A., i, 240.

**3-*o*-Methoxyphenylquinoxaline,** 2-acetyl derivative, and its phenylhydrazone (Sachs and Herold), 1907, A., i, 629.

*N*-*o*- and -*p*-**Methoxyphenylrhodanines** (Holmberg), 1910, A., i, 361.

*o*-**Methoxyphenylserine** and its salts (Erlenmeyer and Bade), 1905, A., i, 131.

*m*-**Methoxyphenyltartronic acid,** *p*-hydroxy-, methyl and ethyl esters (Guyot and Gry), 1910, A., i, 41.

*p*-**Methoxyphenyltartronic acid,** methyl ester (Guyot and Estéva), 1909, A., i, 306.

*p*-**Methoxyphenylterephthaldiamide** (Piutti, Pugliese and Selvaggi), 1910, A., i, 676.

*o*-**Methoxyphenyl-*di*thiobiuret** and -**thiouret** hydriodide and hydrochloride (Fromm and Schneider), 1906, A., i, 657.

**5-Methoxy-3-phenyl-1:3:4-thiodiazole-2-anil** (Busch and Limpach), 1911, A., i, 334.

**6-Methoxyphenylthioglycol-*o*-carboxylic acid** (Kalle & Co.), 1911, A., i, 666.

**5-Methoxy-1-phenyl-1:2:3-triazole-4-carboxylic acid,** *p*-bromo-, ethyl ester (Dimroth and Stahl), 1905, A., i, 386.

*p*-**Methoxyphenyl-2:4:5-trimethoxyphenylcarbinol** (Széki), 1909, A., i, 919.

*p*-**Methoxyphenylvalerophenone** and its oxime (Kohler), 1907, A., i, 1053.

**4′-Methoxy-9-phenylxanthen,** 3:6-*di*hydroxy-, and its diacetyl derivative (Pope and Howard), 1910, T., 974.

**3-Methoxy-9-phenyl-xanthen-9-ol** and **-xanthonium salts** and **2-Methoxy-9-phenylxanthonium** ferrichloride (Decker, v. Fellenberg, and Dinner), 1907, A., i, 1065.

2-, 3-, and **4-Methoxy-9-phenylxanthen-9-ols** (v. Baeyer, Aickelin, Diehl, Hallensleben, and Hess), 1910, A., i, 251.

**6-Methoxy-9-phenylxanthonium,** 3-amino-, and its acetyl derivative, salts of (Kehrmann and Dengler), 1910, A., i, 407.

**Methoxyphenyl-.** See also Anisyl-.

**3-Methoxyphthalanilic acid** (Bentley, Robinson, and Weizmann), 1907, T., 110.

**4-Methoxyphthalanilic acid** (Bentley and Weizmann), 1907, T., 104.

**3-Methoxyphthalic acid** and its derivatives (Robinson), 1906, P., 323; (Bentley, Robinson, and Weizmann), 1907, T., 110.

**4-Methoxyphthalic acid** and its methyl ester, anhydride, anil, and imide (Bentley and Weizmann), 1906, P., 323; 1907, T., 102.
  the fluoresceins and eosins from (Friedl, Weizmann, and Wyler), 1907, T., 1584; P., 214.

**4-Methoxy*iso*phthalic acid,** 6-nitro-, and its esters (Maltese), 1907, A., i, 912.

**4-Methoxyphthalic anhydride,** action of magnesium organic compounds on (Bauer), 1911, A., i, 871.

**3-Methoxyphthalonic acid** and its anhydrophenylhydrazone (Bentley, Robinson, and Weizmann), 1907, T., 109.

**6-Methoxy-*m*-phthalophenone,** 2:4-*di*hydroxy-, and its dibenzoyl derivative (Perkin and Robinson), 1906, P., 306.

**α-Methoxypiperonylpropionic acid,** β-bromo-, and its esters (Hoering), 1907, A., i, 624.

**Methoxypropenylbenzene,** bromo-derivatives of (Hell and Bauer), 1903, A., i, 479.

***l*-Methoxypropionic acid,** methyl ester, reduction of, by hydriodic acid (Irvine), 1906, T., 938; P., 159.

**α-Methoxypropionic acid,** amide and nitrile of (Gauthier), 1909, A., i, 354.

**β-Methoxypropionic acid,** methyl ester (Palomaa and Kilpi), 1911, A., i, 176.

**4-Methoxy-1-propionylbenzene,** bromo- and bromonitro-derivatives (Hoering), 1904, A., i, 577.

**4-Methoxypropiophenone,** ω-chloro-2-hydroxy- (Perkin and Robinson), 1912, P., 8.

**3-Methoxypropylbenzene,** bromonitro- and *di*nitro- (Richter), 1907, A., i, 523.

**4-Methoxypropylbenzene,** 3:5:αββ-*penta*bromo- (Hoering), 1904, A., i, 578.
  3-nitro- (Thoms and Drauzburg), 1911, A., i, 716.

**Methoxypropylbenzenes,** 4- and 3-, 6-nitro-3- and -4-hydroxy- (Thoms and Biltz), 1904, A., i, 400.

**4′-Methoxy-4-*iso*propylchalkone.** See 4-Methoxyphenyl 4 *iso*propylstyryl ketone.

**4-Methoxy-1-propylenebenzene,** 3:5:β-*tri*bromo- (Hoering), 1904, A., i, 578.

**3-Methoxy-*p*-propylenephenol.** See *iso*-Eugenol.

**6-Methoxy-4′-*iso*propylflavanone** and 3-bromo- (v. Kostanecki and Kolker), 1907, A., i, 952.

**6-Methoxy-4′-*iso*propylflavone** (v. Kostanecki and Kolker), 1907, A., i, 952.

**7-Methoxy-4′-*iso*propyl-flavonol** and its acetate and -flavanone (v. Kostanecki and Tobler), 1907, A., i, 952.

**2-Methoxy-4-propylidenequinone** and its bromo-derivatives (Zincke and Hahn), 1904, A., i, 41.

**5-Methoxy-3-propylphenol** (Thoms), 1904, A., i, 47.

**γ-Methoxypropylpiperidine** and its aurichloride (Gabriel and Colman), 1906, A., i, 882.

**6-Methoxy-2-propyl-quinol** and **-quinone** (Thoms), 1903, A., i, 415, 558.

**2-Methoxypyridine,** 3:5-*di*chloro-4-hydroxy-, and its salts (Sell), 1912, T., 1948.

**Methoxypyridines,** 3- and 4-, and their additive salts (Meyer), 1906, A., i, 108.

**5-Methoxypyridine-2-carboxylic acid,** 4-hydroxy-, methyl ester (Meyer), 1906, A., i, 109.

**2-Methoxypyridine-5-carboxylic acid** and its methyl ester (Meyer), 1907, A., i, 344.

**3-Methoxy-4-pyridone** (Peratoner and Tamburello), 1905, A., i, 808.

**Methoxypyrimidine,** *di*chloro- (Büttner), 1903, A., i, 659.

**6-Methoxypyrimidine,** 2-amino-2:4-*di*chloro-, and 4-chloro-2-amino- (Gabriel and Colman), 1904, A., i, 103.

**3-Methoxy-γ-pyrone** (Peratoner and Spallino), 1905, A., i, 806.

**6-Methoxy-2-pyrone-3:5-dicarboxylic acid,** methyl ester (Guthzeit, Weiss, and Schaefer), 1909, A., i, 935.

**6-Methoxyquinaldine-5-carboxylic acid,** 7-hydroxy- (Book), 1903, A., i, 653.

**2- and 4-Methoxyquinazoline** (Bogert and May), 1909, A., i, 329.

**2-Methoxyquinazolone** (McKee), 1912, A., i, 140.

**Methoxy-*o*-quinocatechol hemiether,** *hexa*chloro- (Jackson and Kelley), 1912, A., i, 275.

**5-Methoxyquinol,** 3-hydroxy-, triacetate of (Pollak and Gans), 1903, A., i, 252.

**4-Methoxyquinoline** and its additive salts and ψ-methyl ether and its additive salts (Meyer), 1906, A., i, 604.

**6-Methoxyquinoline,** absorption spectrum of (Dobbie and Fox), 1911, P., 235; 1912, T., 77.
  ethiodide (Decker and Engler), 1903, A., i, 518.

**6-Methoxyquinoline**, 5-bromo-, and its methiodide (Howitz and Bärlocher), 1903, A., i, 279.

4-cyano-, methiodide (Kaufmann, Peyer, and Widmer), 1912, A., i, 651.

5-nitro-, and its salts (Decker, Engler, and Rumine), 1909, A., i, 513.

**8-Methoxyquinoline**, 2-amino- and 2-chloro-, and their salts (Fischer, Berckhemer, and Ulbricht), 1903, A., i, 53.

5-amino-, and its acetyl derivative, and 5-nitro- (Freyss and Paira), 1903, A., i, 198.

bromo-derivatives, and their methiodides (Howitz and Witte), 1905, A., i, 470.

2-thiol-, and its mercurichloride (Fischer, Berckhemer, and Ulbricht), 1903, A., i, 53.

**2-Methoxyquinoline-3-carboxylic acid** (Meyer), 1907, A., i, 344.

**6-Methoxy-4-quinolyl methyl ketone** (Kaufmann, Peyer, and Kunkler), 1912, A., i, 1018.

**1-Methoxy-*o*-quino-1-monoxide**, *octa*bromo-1′-hydroxy-, action of acetic anhydride on (Jackson and Flint), 1910, A., i, 121.

**1-Methoxy-3:4-quinonediazide**, 2:5- and 2:6-*di*nitro-, and their azo-derivatives (Meldola and Reverdin), 1910, T., 1206.

**α-Methoxy*iso*safrole iodohydrin** (Hoering), 1908, A., i, 896.

***p*-Methoxysalicylaldehyde.** See Anisaldehyde, *o*-hydroxy-.

***p*-Methoxysalicylideneaniline** (Goulding and Pelly), 1911, P., 235.

***p*-Methoxysalicylidenedimethoxy-α-hydrindone** (Perkin and Robinson), 1906, P., 161.

**4′-Methoxy-4-stilbazole**, salts of (Proske), 1909, A., i, 413.

**2-Methoxystilbene** and its **β-carboxylic acid** (Funk and v. Kostanecki), 1905, A., i, 352.

**2-Methoxystilbene**, 4′-hydroxy- (Stoermer and Friemel), 1911, A., i, 632.

**3-Methoxystilbene**, 2′:4′-*di*nitro-4-amino-, and its acetyl derivative (Khotinsky and Jacopson-Jacopmann), 1909, A., i, 805.

**4-Methoxystilbene** and its dibromide (Erlenmeyer and Lattermann), 1904, A., i, 1017.

preparation of (Hell), 1904, A., i, 242.

**4-Methoxystilbene**, β-nitro-, reactions of (Meisenheimer and Jochelson), 1907, A., i, 860.

*p*′-nitro- (Hewitt, Lewcock, and Pope), 1912, T., 607.

**2-Methoxystilbene-α-carboxylic acid** (Czaplicki, v. Kostanecki, and Lampe), 1909, A., i, 235.

**3-Methoxystilbene-β-carboxylic acid** (Funk and v. Kostanecki), 1905, A., i, 352.

**2′-, 3′-,** and **4′-Methoxystilbene-α-carboxylic acids**, 2-hydroxy-, derivatives of (Czaplicki, v. Kostanecki, and Lampe), 1909, A., i, 236.

**α-Methoxystyrene** (Moureu), 1903, A., i, 699; (Tiffeneau), 1908, A., i, 19.

***o*-Methoxystyrene** (Pschorr and Einbeck), 1905, A., i, 590.

***p*-Methoxystyrene**, nitro-, ψ-nitrosite and nitro-oxime of (Wieland and Semper), 1908, A., i, 109.

β-nitro- (Rosenmund), 1910, A., i, 106.

ω-3-*di*nitro- (Remfry), 1911, T., 286; P., 21.

**3-Methoxystyryl cinnamylidenemethyl ketone**, 4-hydroxy- (*vanillylidenecinnamylideneacetone*) (Francesconi and Cusmano), 1908, A., i, 802.

**5-Methoxy-2-styrylcoumarone** (Abelin and v. Kostanecki), 1910, A., i, 631.

**2-*m*-Methoxystyryl-4-dihydroquinazolone methiodide**, 2-*p*-hydroxy- (Bogert and Geiger), 1912, A., i, 511.

***o*-Methoxystyryl ethyl ketone** (Auwers and Voss), 1910, A., i, 71.

**3-Methoxystyryl-1-hydroxynaphthyl-2-ketone**, 4-hydroxy-, and its diacetyl derivative (Milobendzki, v. Kostanecki, and Lampe), 1910, A., i, 628.

**3-Methoxystyryl methyl ketone**, 4-hydroxy- (*vanillylideneacetone*), hydrochloride (Francesconi and Cusmano), 1908, A., i, 803.

**4-Methoxystyryl methyl ketone** (*anisylideneacetone*) hydrochlorides (Francesconi and Cusmano), 1908, A., i, 803.

ψ-nitrosite and α-nitro-derivatives of (Wieland and Bloch), 1905, A., i, 707.

***p*-Methoxystyryl nonyl ketone**, and its semicarbazone (Scholtz and Meyer), 1910, A., i, 562.

**2-*m*-Methoxystyryl-4-quinazolone**, *p*-hydroxy- (Bogert, Bell, and Amend), 1911, A., i, 162.

*p*-**Methoxystyryl β-styrylvinyl ketone** (*anisylidenecinnamylideneacetone*) and its hydrochlorides and bromides (Francesconi and Cusmano), 1908, A., i, 802.
  bromides of (Bauer and Dieterle), 1911, A., i, 881.
*l*-**Methoxysuccinamic acid** (Purdie and Young), 1910, T., 1532.
*l*-**Methoxysuccindiamide** (Purdie and Neave), 1910, T., 1519.
*l*-**Methoxysuccindianilide** (Purdie and Neave), 1910, T., 1520.
*l*-**Methoxysuccinic acid,** methyl ester, action of Grignard reagents on (Purdie and Arup), 1910, T., 1537 ; P., 199.
  and its methyl hydrogen ester, and anhydride (Purdie and Young), 1910, T., 1531 ; P., 198.
  esters of, from malic acid (Purdie and Neave), 1910, T., 1517 ; P., 198.
*l*-**Methoxysuccinyl chloride** (Purdie and Young), 1910, T., 1530.
*p*-**Methoxy**-*m*-**sulphaminebenzoic acid** and its salts (Alleman), 1904, A., i, 202.
**Methoxysulphonic acid,** yttrium salt (Pratt and James), 1911, A., ii, 893.
**Methoxyterephthalic acids,** 2- and 4- (Eykman), 1904, A., i, 665.
9-**Methoxy**-$\Delta^{1(6)}$-**tetrahydrocarbazole** (Borsche, Witte, and Bothe), 1908, A., i, 366.
2-**Methoxytetrahydropyrimidine** (Farbenfabriken vorm. F. Bayer & Co.), 1905, A., i, 159.
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- β-**Methyladipic acid** and its esters, salts, and anilides (Markownikoff), 1903, A., i, 844.
  - preparation of (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 650.
  - synthesis of (Noyes and Cox), 1904, A., i, 10.
  - α-substituted (Desfontaines), 1904, A., i, 288.
  - esters, rotation of (Haller and Desfontaines), 1905, A., ii, 429.
  - methyl ester (Semmler and Mayer), 1911, A., i, 733.
- β-**Methyladipic acid,** δ-amino-, and its copper salt (Dieckmann), 1905, A., i, 417.
  - αδ-*di*bromo-, and its methyl ester (Davies, Stephen, and Weizmann), 1912, P., 95.
  - β-hydroxy-, lactone of, ethyl ester (Duden and Freydag), 1903, A., i, 400.
- γ-**Methyladipic acid,** α-amino-, *N*-benzoyl derivative of (Dieckmann), 1905, A., i, 418.
- **Methyladipic acids,** α- and β- (Perkin and Tattersall), 1905, T., 1085.
- α-**Methyladrenaline** (Böttcher), 1909, A., i, 153.
- β-**Methyladrenaline** and its hydriodide and dimethyl ether (Mannich and Jacobsohn), 1909, A., i, 321.
- *N*-**Methyladrenaline** trimethyl ether, and its hydrochloride (Mannich and Neuberg), 1910, A., i, 413.
  - methylene ether, its methyl ether and derivatives (Mannich and Jacobsohn), 1910, A., i, 414.
- β-**Methyl*iso*adrenaline** dimethyl ether, hydrochloride (Mannich and Jacobsohn), 1910, A., i, 413.
  - methylene ether, and its methyl ether and derivatives (Mannich and Jacobsohn), 1910, A., i, 414.
- β-**Methylæsculetin,** derivatives of (Bargellini and Martegiani), 1912, A., i, 292.
  - acetyl derivative (Power and Moore), 1909, T., 256 ; P., 27.
- **Methylal,** chlorination of (Henry ; Descudé), 1906, A., i, 558.
  - and sulphuric acid, condensation of petroleum with (Herr), 1910, A., ii, 904.
- 1-**Methylalizarin** 3:4-dimethyl ether (Perkin and Weizmann), 1906, T., 1660.
- γ-**Methyl-α-alkyladipic acids,** esters, rotation of (Haller and Desfontaines), 1905, A., ii, 429.
- 5-**Methyl-2-alkylbenziminazoles,** preparation of (Fichter and Rosenberger), 1907, A., i, 85.
- **Methylalkyldimethylaminomethylcarbinols** and their benzoates and chlorohydrins (Fourneau), 1904, A., i, 377.
- 1-**Methyl-4-alkyl-3-*cyclo*hexanols,** synthesis of, and their phenylcarbamates (Haller and March), 1905, A., i, 214, 276.
- 1-**Methyl-4-alkyl-4-*cyclo*hexanols** and their phenylcarbamates (Sabatier and Mailhe), 1906, A., i, 254.
- 1-**Methyl-4-alkyl-3-*cyclo*hexanones** and their semicarbazones (Haller), 1905, A., i, 214.
- 1-**Methyl-4-alkyl*cyclo*hexenes** (Sabatier and Mailhe), 1906, A., i, 254.
- 4-**Methyl-1-alkyl-2-*cyclo*pentanonecarboxylic acids,** esters, rotation of (Haller and Desfontaines), 1905, A., ii, 429.
- β-**Methylallantoin,** constitution of (Siemonsen), 1904, A., i, 951.
- α-**Methylallyl alcohol.** See $\Delta^{\alpha}$-Buten-γ-ol.
- γ-**Methylallylacetic acid.** See γ-Methyl-$\Delta^{\gamma}$-pentenoic acid.
- **Methylallyladipic acid** (*octylenedicarboxylic acid*), βδ- or δα-, and its esters (Haller and Desfontaines), 1903, A., i, 628.
- **Methylallyl-*o*-anisidine** and its picrate (Wedekind and Fröhlich), 1906, A., i, 162.
- **Methylallyl-*p*-anisidine** (Fröhlich and Wedekind), 1907, A., i, 411.
- *p*-**Methylallylbenzene** (Kunckell), 1903, A., i, 617.
- β-**Methyl-α-allylbutyric acid,** α-hydroxy-, and its ethyl ester (Darzens), 1911, A., i, 260.
- **Methylallyldiacetonalkamine.** See Methyl-β-methylallylamino*iso*butylcarbinol.
- **Methylallylglutaconimide,** cyano-, and its metallic derivatives (Guareschi), 1905, A., i, 823.
- 1-**Methyl-3-allyl*cyclo*hexan-3-ol,** and its oxidation products (Saytzeff), 1911, A., i, 444.
- 1-**Methyl-3-allyl-$\Delta^1$-*cyclo*hexen-3-ol** (Matschurevitsch), 1911, A., i, 962.
- 1-**Methyl-3-allyl*cyclo*pentan-4-one** and its semicarbazone (Blanc), 1907, A., i, 710.
- 4-**Methyl-1-allyl-** and **-1-*n*-propyl-2-*cyclo*pentanone-2-carboxylic acids,** ethyl esters (Haller and Desfontaines), 1903, A., i, 628.

**Methylallyl-*p*-phenetidine** (Wedekind and Fröhlich), 1907, A., i, 410.
**Methylallylpropylamine** and its platinichloride and aurichloride (Emde and Schellbach), 1911, A., i, 282.
**1-Methyl-3-allyl-4-*iso*propylidene*cyclo*hexan-3-ol** (v. Fersen), 1910, A., i, 863.
**4-Methyl-1-allyltetrahydro-6-pyrimidone,** 2-imino-, and its picrate (Majima), 1908, A., i, 223.
**Methylallyltetrahydroquinaldinium** iodide (Wedekind), 1905, A., i, 521.
**Methylallyltetrahydroquinolium** salts, resolution of (E. and O. Wedekind), 1907, A., i, 1073.
**Methylallyl-*o*-toluidine** (Wedekind and Oberheide), 1904, A., i, 992.
**Methylallyl-*p*-toluidine** and its picrate (Wedekind and Oberheide), 1904, A., i, 733.
**4-Methyl-1-** and **-3-allyluracil** (Bückendorff), 1912, A., i, 55.
**4-Methyl-3-*iso*amenylsalicylic acid** and its dibromide (Meerwein), 1908, A., i, 90.
**Methylamine,** two methods of preparing (François), 1908, A., i, 506, 768; (Bertheaume), 1908, A., ii, 742.
  preparation of, from ammonia and methyl sulphate (Burmann), 1906, A., i, 933.
  modification of the preparation of, from bromoacetamide (François), 1908, A., i, 956.
  theory of the preparation of, from solutions of acetylbromoamide (François), 1909, A., i, 13.
  liquid, as a solvent, and a study of its chemical reactivity (Gibbs), 1906, A., i, 933.
  optical rotatory power of solutions of (Sherry), 1907, A., ii, 920.
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  boiling point of (Gibbs), 1905, A., ii, 570.
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  action of, on cæsium (Rengade), 1905, A., i, 174.
  action of, on chromic chloride (Lang and Jolliffe), 1903, P., 147.
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  action of, on furfuraldehyde (Litterscheid), 1905, A., i, 76.
  action of, on mesityl oxide (Hochstetter and Kohn), 1904, A., i, 18.
**Methylamine,** action of, on salicylic acid and methyl *o*-ethoxybenzoate (Nicola), 1907, A., i, 853.
  compound of, with cuproso-cupric cyanide (Litterscheid), 1904, A., i, 301.
  combinations of, with mercuric iodide (François), 1906, A., i, 484.
  silver compounds, composition of (Bodländer and Eberlein), 1904, A., i, 145.
  *N*-benzoyl derivative, *N*-chloro- (Slosson), 1903, A., i, 476.
  thiobenzoyl derivative (Sachs and Loevy), 1904, A., i, 307.
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  iodomercurates and chloroiodomercurate of (François), 1905, A., i, 574.
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  styphnate, preparation and crystallography of (Jerusalem), 1909, T., 1285.
  separation of ammonia and (François), 1907, A., i, 391; ii, 503.
**Methylamine,** *N*-nitro-. See Methylnitroamine.
**Methylamines,** heat of combustion and relative density of (Muller), 1910, A., ii, 485.
  detection of, in presence of ammonia (Tsalapatini), 1908, A., ii, 440.
**Methylaminoacetocatechol** and its hydrochloride (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 873.
**Methylaminoacetonitrile,** cyano- (v. Braun), 1907, A., i, 899.
**Methylaminoacetylcatechol** (Dakin), 1905, P., 154.
**β-Methylamino-α-acetylcrotonic acid,** ethyl ester (Benary), 1909, A., i, 890.
**Methyl ε-aminoamyl ketone** and its picrate, platinichloride, and phenylhydrazone (Gabriel), 1909, A., i, 492.
**2:5-*p*-Methylaminoanilo-1-phenyl-2:3-dimethylpyrazole** and its salts and derivatives (Michaelis, Wurl, and Doepmann), 1911, A., i, 1041.
**3-Methylaminoanisole,** 2:4-*di*nitro- (Blanksma), 1909, A., i, 150.
  4:6-*di*nitro- (Blanksma), 1904, A., i, 577.
**Methyl-2:4-*di*aminoanisole** (Aktien-Gesellschaft für Anilin-Fabrikation), 1911, A., i, 493.

**1-Methylaminoanthraquinone** (Farbenfabriken vorm. F. Bayer & Co.), 1905, A., i, 145; (Ullmann and Fodor), 1911, A., i, 467.

**1-Methylaminoanthraquinone,** 5- and 8-amino- (Schmidt), 1904, A., i, 257.

  **Methylaminoanthraquinone,** 4-bromo- (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 469.

  6- and 7-chloro- (Badische Anilin- & Soda-Fabrik), 1909, A., i, 940.

  2- and 4-nitro- (Farbenfabriken vorm. F. Bayer & Co.), 1905, A., i, 362.

**4- and 5-Methylaminoanthraquinones,** 1-thiocyano-, and their derivatives (Gattermann), 1912, A., i, 1000.

**5- and 8-Methylaminoanthraquinones,** 2-chloro-derivatives of (Badische Anilin- & Soda-Fabrik), 1909, A., i, 940.

**6- and 7-Methylaminoanthraquinones,** 1-amino-derivatives of (Badische Anilin- & Soda-Fabrik), 1909, A., i, 940.

**Methylaminoanthraquinone-2-carboxylic acid** and its salts (Badische Anilin- & Soda-Fabrik), 1912, A., i, 979.

**1-Methylaminoanthraquinone-5- and -8-sulphonic acids** (Schmidt), 1904, A., i, 257; (Farbenfabriken vorm. F. Bayer & Co.), 1907, A., i, 942.

**1-Methylamino-4-β-anthraquinonylaminoanthraquinone** (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 445.

**4-Methylaminoanthraquinonylthiolacetic acid** (Gattermann), 1912, A., i, 1004.

**4- and 5-Methylaminoanthraquino-1-thiazoles** (Gattermann), 1912, A., i, 1005.

*p′*-**Methylaminoazobenzene,** *p*-nitro-, and its acetyl derivative (Witt and Kopetschni), 1912, A., i, 518.

*o*-**Methylaminobenzaldehyde** and its salts, oxime, phenylhydrazones, and benzoyl derivative (Bamberger), 1904, A., i, 423.

  physical constants of (Schmidt), 1905, A., i, 213.

  phenylhydrazone (Heller), 1904, A., i, 160.

*p*-**Methylaminobenzaldehydephenylhydrazone,** liquid crystals of (Rotarski), 1908, A., i, 640.

*o*-**Methylaminobenzoic acid.** See Methylanthranilic acid.

*m*-**Methylaminobenzoic acid,** hydrochloride, and its ethyl ester (Houben and Brassert), 1910, A., i, 170.

*p*-**Methylaminobenzoic acid** (Houben), 1904, A. i, 1014.

*p*-**Methylaminobenzoic acid** and its methyl ester (Johnston), 1905, P., 156.

  and its salts and nitroso-derivative (Jaffé), 1905, A., i, 344.

  diethylaminoethyl and piperidylethyl esters (Farbwerke vorm. Meister, Lucius, & Brüning, 1907, A., i, 924.

  ethyl ester, and its hydrochloride (Houben, Schottmüller, and Brassert), 1909, A., i, 922.

*p*-**Methylaminobenzoic acid,** 3-nitro-, and its ethyl ester and acetyl derivative (Noelting and Demant), 1904, A., i, 424.

    methyl ester, 3:5-*di*nitro-, and its methyl ester, and 3:5-*di*nitro-ω-nitro-, and 3:5-*di*nitro-ω-nitroso-, methyl esters (Reverdin and de Luc), 1908, A., i, 167.

  3:5-*di*nitro- (Ullmann and Wosnessensky), 1909, A., i, 475.

  nitroso- (Baudisch), 1907, A., i, 131.

**Methylaminobenzoic acids,** *m*- and *p*-, ω-cyano- (Houben and Arnold), 1908, A., i, 534.

*p*-**Methylaminobenzonitrile** and nitroso- (Sachs and Steinert), 1904, A., i, 507.

*o*-**Methylaminobenzophenone** (Ullmann and Bleier), 1903, A., i, 176.

β-**Methylamino-α-benzoylcrotonic acid,** ethyl ester (Benary), 1909, A., i, 890.

**Methylaminobenzylacetomethylamide,** transformation of, into benzoylacetomethylamide (Guareschi), 1904, A., i, 891.

**5-Methylaminobenzyl-3-methylbenzoic acid,** 2-hydroxy- (Anilinfarben & Extrakt-Fabriken vorm. J. R. Geigy), 1911, A., i, 978.

ω-**Methylaminobenzylmethylcarbinol** and its hydrochloride (Schmidt and Calliess), 1911, A., i, 743.

ω-**Methylaminobenzyl methyl ketone** and its hydrochloride (Schmidt and Calliess), 1911, A., i, 743.

**Methylaminobishydroxy*iso*butyric acid,** ethyl ester (Fourneau), 1909, A., i, 211.

β-**Methylamino-*n*-butane,** and its derivatives (Löffler and Freytag), 1910, A., i, 632.

**Methyl-β-amino*iso*butylcarbinol.** See Diacetonealkamine.

**γ-Methylaminobutyric acid** (Tafel and Wassmuth), 1907, A., i, 720.

α- and **γ-Methylaminobutyric acids**, and their derivatives (Gansser), 1909, A., i, 703.

**Methylaminocamphene** and its platinichloride (Forster and Micklethwait), 1904, T., 334; P., 19.

**4-Methylamino-3-carbomethoxyphenyl-μ-cyanoazophenylmethine**, 4′-nitro-, and its salt with sulphuric acid (Houben, Brassert, and Ettinger), 1909, A., i, 646.

**4-Methylamino-3-carboxyphenyl-μ-cyanoazomethinecarboxylic acid**, ethyl ester (Houben, Brassert, and Ettinger), 1909, A., i, 646.

**4-Methylamino-3-carboxyphenyl-μ-cyanoazophenylmethine**, and 4′-nitro- (Houben, Brassert, and Ettinger), 1909, A., i, 646.

***N*-Methyl-6-aminocoumarin** and its benzenesulphonyl and nitroso-derivatives (Morgan and Micklethwait), 1904, T., 1238; P., 177.

**Methyl*di*aminodiarylmethane-ω-sulphonic acids** (Anilinfarben- & Extract-fabriken vorm. J. R. Geigy), 1904, A., i, 452.

**6-Methylaminodihydro-2-pyrimidone** and 5-amino- (Johns), 1911, A., i, 507.

**γ-Methylamino-αγ-dimethylbutyl** benzoate (Chemische Fabrik auf Aktien vorm. E. Schering), 1907, A., i, 925.

**4-Methylamino-3:3′-dimethyldiphenyl-4′-azo-*p*-dimethylaniline** and its derivatives (Rassow and Becker), 1911, A., i, 932.

**4-Methylamino-3:3′-dimethyldiphenyl-4′-azo-β-naphthol** (Rassow and Becker), 1911, A., i, 932.

**4-Methylamino-3:3′-dimethyldiphenyl-4′-azo-β-naphthol-(3:6)-disulphonic acid**, sodium salt (Rassow and Becker), 1911, A., i, 933.

**4-Methylamino-3:3′-dimethyldiphenyl-4′-diazonium** chloride (Rassow and Becker), 1911, A., i, 932.

**Methylaminodimethylethylcarbinol** and its acyl derivative (Riedel), 1907, A., i, 897.

and its divaleryl derivative (Riedel), 1908, A., i, 957.

**ε-Methylamino-βε-dimethyl-$\Delta^{\beta}$-hexene.** See Nonylene, ε-amino-.

**5-Methylamino-1:3-dimethylhydantoin,** (*acecaffeine*) (Biltz and Krebs), 1911, A., i, 241.

**1-Methylamino-2:5-dimethylpyrrole-3:4-dicarboxylic acid** (Bülow, Riess, and Sautermeister), 1905, A., i, 661.

**4-Methylamino-1:4-di-** and **-1:2:2:4-tetra-methyl-5-pyrrolidones** and their phenylthiocarbamides (Kohn), 1908, A., i, 829.

**α-Methylamino-αγ-dimethylvaleric acid**, γ-hydroxy-, lactone. See 5-Keto-4-methylamino-2:2:4-trimethyltetrahydrofuran.

4′-(or 2′-)**Methylaminodiphenyl**, 2-(or 4)-amino-, and its derivatives (Rassow and Berger), 1911, A., i, 821.

**Methylaminodiphenylacetic acid** (Biltz and Seydel), 1912, A., i, 910.

**4′-Methylaminodiphenylamine,** 3′-chloro-4-hydroxy- (Chemische Fabrik Griesheim-Elektron), 1906, A., i, 890.

**4-Methylaminodiphenyl-4′-azo-*p*-dimethylaniline** and its hydrochloride (Rassow and Berger), 1911, A., i, 821.

**4′-Methylamino-4-ethoxydiphenylamine,** 3′-chloro- (Chemische Fabrik Griesheim-Elektron), 1906, A., i, 890.

**4-Methylamino-5-ethoxy-1-phenyl-3-methylpyrazole,** cyano- (Farbwerke vorm. Meister, Lucius, & Brüning), 1908, A., i, 472.

**β-Methylaminoethyl** alcohol and ether, melting point, specific gravity, and refractive index of (Knorr and Meyer), 1905, A., i, 748.

benzoate and its hydrochloride (Chemische Fabrik auf Aktien vorm. E. Schering), 1906, A., i, 952.

ether and its salts (Knorr and Meyer), 1905, A., i, 748.

mercaptan and its picrate (Gabriel and Colman), 1912, A., i, 530.

**2-β-Methylaminoethylbenzaldehyde** (Pyman), 1909, T., 1749.

**1-Methyl-4-aminoethyl-3-ethyl-** and **-3-vinyl-piperidines** and their additive salts (Koenigs, Bernhart, and Ibele), 1907, A., i, 717.

4(or 5)-**Methyl-5**(or 4)-**β-aminoethylglyoxaline** and its salts (Ewins), 1911, T., 2057; P., 259.

**2-β-Methylaminoethylpyridine** and its salts (Löffler), 1904, A., i, 265.

**6-Methylamino-2-ethylthiol-4-methylpyrimidine** (Johns), 1912, A., i, 589.

**6-Methylamino-2-ethylthiolpyrimidine** (Johns), 1911, A., i, 506.

**Methylaminofluoran**, chloro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1903, A., i, 510.

**δ-Methylamino-*n*-heptane** and its derivatives (Löffler and Freytag), 1910, A., i, 632.

**1-Methylamino-$\Delta^4$-*cyclo*hepten-3-ol** and its isomeride (Willstätter), 1903, A., i, 360.

**γ-Methylaminohexane** and its platinichloride (Löffler and Bobiloff), 1910, A., i, 633.

**Methylamino*cyclo*hexane** (Sabatier and Mailhe), 1912, A., i, 103.

**Methyl ζ-aminohexyl ketone** and its aurichloride and platinichloride (Gabriel), 1909, A., i, 891.

benzenesulphonyl derivative of (Gabriel), 1910, A., i, 229.

**β-Methylamino-α-hydroxy*iso*butyric acid** and its ethyl ester (Les Établissements Poulenc Frères and Ernest Fourneau), 1908, A., i, 938.

methylamide of (Fourneau), 1909, A., i, 211.

**4′-Methylamino-2:4-*di*hydroxydiphenylmethane** (Friedländer and v. Horvath), 1903, A., i, 253.

**3-Methylamino-4-hydroxyphenylarsinic acid** (Bertheim), 1912, A., i, 818.

**ε-Methylamino-ε-imino-βδ-*di*hydroxy-αγ-diphenylpentane** (Späth), 1912, A., i, 979.

**α-Methylamino-β-3:5-*di*-iodo-4-hydroxyphenylpropionic acid** (Johnson and Nicolet), 1912, A., i, 586.

**Methylaminoketo-**. See Ketomethylamino-.

**1-Methylamino-4-methoxyanthraquinone** (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 469.

**2-Methylamino-3-methoxybenzoic acid.** See Damasceninic acid.

**α-Methylamino-β-*p*-methoxyphenylpropionic acid** (Friedmann and Gutmann), 1910, A., i, 741.

**2-Methylamino-8-methoxyquinoline** and its nitrosoamine (Fischer, Berckhemer, and Ulbricht), 1903, A., i, 53.

***p*-Methylamino-*m*-methylbenzylidene-*p*-dimethylaminoaniline** (Ullmann and Frey), 1904, A., i, 423.

**2-Methylamino-5-methyldihydro-6-pyrimidone** and its salts (Johnson and MacKenzie), 1909, A., i, 840.

**2-Methylamino-5-methyldihydro-6-pyrimidone-4-carboxylic acid** and its methylamine salt and hydrochloride (Johnson and MacKenzie), 1909, A., i, 840.

**β-Methylamino-3:4-methylenedioxyphenyl-α-ethanol** (Pauly and Neukam), 1909, A., i, 97.

**α-Methylaminomethylglucoside** and its additive compound with silver iodide (Irvine and Hynd), 1912, T., 1141.

**1-Methyl-4- and -5-β-aminomethylglyoxaline** and their salts (Pyman), 1911, T., 2182 ; P., 275.

**4**(or **5**)**-Methyl-5**(or **4**)**-aminomethylglyoxaline** and its salts (Ewins), 1911, T., 2059 ; P., 259.

**δ-Methylamino-β-methylheptan-ζ-ol.** See Methyl-β-methylamino*iso*heptylcarbinol.

**γ-Methylamino-β-methylhexan-ε-ol.** See Methyl-β-methylamino*iso*amylcarbinol.

**β-Methylamino-β-methylpentane**, δ-amino-, and its additive salts and cyclic carbamide (Kohn and Morgenstern), 1908, A., i, 769.

δ-bromo-, hydrobromide of (Kohn), 1907, A., i, 338.

**2-Methylamino-4-methylpyrimidine**, 6-chloro-, and its picrate (Johnson and MacKenzie), 1909, A., i, 840.

**2-Methylamino-5-methylpyrimidine** and its hydrochloride and picrate and 6-chloro- (Johnson and MacKenzie), 1909, A., i, 839.

**6-Methylamino-4-methyl-2-pyrimidone**, and 5-nitro- (Johns), 1912, A., i, 589.

5-amino-, acetyl derivative (Johns), 1912, A., i, 799.

**Methylamino-1-methyltetrahydroquinazoline-2:4-dione** (Kunckell), 1910, A., i, 439.

**2-Methylamino-4-methylthiazole**, methylation of (Young and Crookes), 1905, P., 308 ; 1906, T., 68.

**6-Methylamino-2-methylthiol-5-methylpyrimidine**, 4-chloro- (Wheeler and Jamieson), 1904, A., i, 942.

**5-Methylamino-4-methyluracil** (Wheeler and Jamieson), 1904, A., i, 942.

**α-Methylamino-β-*aci*-*di*nitroethane** (Duden, Bock, and Reid), 1905, A., i, 568.

**8-Methylaminoparaxanthine** (Boehringer & Söhne), 1905, A., i, 230.

**β-Methylamino-*n*-pentane** and its derivatives (Löffler and Bobiloff), 1910, A., i, 633.

**2-Methylaminophenetole**, 3-nitro- (Blanksma), 1908, A., i, 978.

3:5-*di*nitro-, and its nitroamine (Blanksma), 1905, A., i, 431.

*N*-**Methyl-*o*-aminophenol**, *N*-acetyl derivative of (Lees and Shedden), 1903, T., 756 ; P., 132.

*m*-**Methylaminophenol** and its dibenzoyl derivative (Biehringer and Tanzen), 1912, A., i, 347.

*p*-**Methylaminophenol**, sulphurous acid compound of (Société anonyme des Plaques et Papiers photographiques, A. Lumière et ses Fils), 1908, A., i, 977.

**4-Methylaminophenyl** benzoate and 2:3-*di*nitro- (Reverdin and de Luc), 1909, A., i, 377.

*o*-toluenesulphonate, and 2:3-*di*nitro- (Reverdin and de Luc), 1909, A., i, 377.

**Methylaminophenylacetic acid**, ethyl ester (Fourneau and Vila), 1912, A., i, 26.

*α*-**Methylamino-*α*-phenylbutan-*γ*-ol** and its additive salts and nitroso-derivative, and aurichloride of the methiodide of its methyl ether (Kohn), 1907, A., i, 680.

**Methylaminophenyldimethylcarbinol** and its dibenzoyl derivative (Riedel), 1907, A., i, 897 ; 1908, A., i, 957.

**1-Methylaminophenyl-2:4-dimethyl-3-hydroxymethylpyrazolone**, *p*-cyano- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 340.

*β*-**Methylamino-*β*-phenyl-*αα*-dimethylpropionic acid**, and its lactam (Staudinger, Klever, and Kober), 1910, A., i, 588.

**1-*p*-Methylaminophenyl-3:4-dimethyl-5-pyrazolone** and its acetyl derivative (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 136.

*p*-**Methylaminophenyl-*α*- and -*β*-hydroxynaphthylmethanes** (Friedländer and v. Horvath), 1903, A., i, 253.

*p*-**Methylaminophenyl-2:3- and -2:7-*di*hydroxynaphthylmethanes** (Friedländer and v. Horvath), 1903, A., i, 253.

**Methylaminophenyliminoalloxanic acid** (Kühling and Kaselitz), 1906, A., 465.

**Methylaminophenyl-lactic acid**, methylamide of, and its derivatives (Fourneau), 1907, A., i, 623.

**3-Methylaminophenylmethylnitroamine**, 4-bromo-2:6-*di*nitro- (Blanksma), 1903, A., i, 333.

**4-Methylamino-1-phenyl-3-methylpyrazolone**, *N*-chloroacetyl derivative (Einhorn and Mauermayer), 1906, A., i, 252.

**3-Methylamino-1-phenyl-5-*β*-naphthylpyrazole** (Michaelis and Hepner), 1905, A., i, 481.

*γ*-**Methylamino-*α*-phenylpropyl alcohol** and its salts (Fourneau), 1907, A., i, 763.

*γ*-**Methylamino-*β*-phenylpropyl alcohol** and its additive salts (Fourneau), 1905, A., i, 57.

*α*-**Methylamino-*α*-phenyl*iso*propyl alcohol** and its hydrochloride and platinichloride (Emde and Runne), 1911, A., i, 715.

*o*-**Methylaminophenyl-*o*-toluidinoacetic acid** (v. Ostromisslensky), 1908, A., i, 82.

**5-Methylamino-1-phenyl-1:2:3-triazole** (Dimroth and Hess), 1909, A., i, 268.

**1-*p*-Methylaminophenyl-2:3:4-trimethyl-5-pyrazolone** and its acetyl derivative (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 136.

*β*-**Methylaminopropaldehyde** diethylacetal (Wohl and Johnson), 1908, A., i, 49.

*α*-**Methylaminopropionic acid**, derivatives of (Gansser), 1909, A., i, 702.

ethyl ester (Zelinsky, Annenkoff, and Kulikoff), 1911, A., i, 773.

*α*-**Methylaminopropionic acid**, *β*-amino-, and its derivatives (Tafel and Frankland), 1909, A., i, 829.

*β*-**Methylaminopropionic acid** and its derivatives (Gansser), 1909, A., i, 703.

**Methyl *β*-aminopropyl ketone** and its aurichloride and platinichloride (Gabriel and Colman), 1909, A., i, 492.

**Methyl *β*-amino*iso*propyl ketone**, salts and derivatives of (Gabriel), 1911, A., i, 213.

**2-Methylaminoterephthalic acid**, methyl esters (Wegscheider, Faltis, Black, and Huppert), 1912, A., i, 264.

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**3-Methylaminotetrahydroquinazoline-2:4-dione** (Kunckell), 1910, A., i, 438.

**4-Methylamino-1-thiolanthraquinone**, derivatives of (Gattermann), 1912, A., i, 1000.

**6-Methylamino-3-tolualdehyde** and its phenylhydrazone (Ullmann and Frey), 1904, A., i, 424.

6-**Methylamino-*m*-toluic acid** (Houben, Schottmüller, and Freund), 1910, A., i, 34.
*p*-**Methylamino-*o*-toluidine.** See 2:4-Tolylene-4-*N*-methyldiamine.
*o*-**Methylaminotriphenylmethane** and its salts and acyl derivatives (v. Baeyer and Villiger), 1904, A., i, 899.
*p*-**Methylaminotriphenyl-methane** and **-carbinol** and its acetate and picrate (v. Baeyer and Villiger), 1904, A., i, 786.
α-**Methylaminovaleric acid,** δ-*m*-nitrobenzoylamino- (Fischer and Zemplén), 1909, A., i, 793.
**Methyl-4:6-*di*amino-*m*-xylene.** See *m*-Xylylenemethyl-4:6-diamine.
**Methylammonium** magnesium arsenate (Brisac), 1903, A., i, 606.
  iridichloride (Gutbier and Lindner), 1909, A., ii, 1025.
    and iridibromide (Gutbier and Riess), 1910, A., i, 97.
  nitrite (Rây and Rakshit), 1911, T., 1016; P., 22.
  magnesium phosphate (Porcher and Brisac), 1903, A., i, 607.
  osmichloride (Gutbier and Maisch), 1911, A., i, 18.
  palladi-bromide and -chloride (Gutbier and Woernle), 1907, A., i, 88.
  platinibromide (Gutbier and Bauriedel), 1910, A., i, 12.
  tungstate (Ekeley), 1909, A., i, 556.
γ-**Methylamyl alcohol.** See Hexyl alcohol, active.
**Methyl*iso*amyl*iso*allylcarbinol.** See δη-Dimethyl-$\Delta^{\beta}$-octen-δ-ol.
**Methyl-*n*-amylamine** and its derivatives (Löffler and Freytag), 1910, A., i, 632.
**Methyl*iso*amylamine,** preparation of (Clarke), 1905, A., i, 428.
  picrate (Löffler and Lukowsky), 1910, A., i, 632.
**Methyl*iso*amylaniline,** preparation of (Thomas and Jones), 1906, T., 294.
**Methyl*iso*amylaniline,** *p*-bromo-, and its additive salts (Hill), 1907, A., i, 692.
γ-**Methylamylbenzene,** γ-hydroxy-, and its phenylurethane (Klages), 1904, A., i, 569.
α-**Methyl-γ-*n*-amylbutyrolactone,** hydrazine compound of (Blaise and Luttringer), 1905, A., i, 330.
α-**Methyl-*n*-amylcarbinol,** and its hydrogen phthalate and brucine and strychnine salts of the latter (Pickard and Kenyon), 1911, T., 60, 65.
*l*-**Methyl-*n*-amylcarbinol,** and hydrogen phthalate of, and its cinchonidine salt (Pickard and Kenyon), 1911, T., 61, 65.
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**Methyl amyl diketone** (*acetylhexoyl*), oximes of (Locquin), 1905, A., i, 19.
δ-**Methyl-$\Delta^{\alpha}$-amylene,** β-chloro- (Clarke), 1908, A., i, 594.
β-**Methyl-$\Delta^{\beta}$-amylene,** ε-chloro-, dibromide (Van Aerde), 1909, A., i, 79.
δ-**Methyl-$\Delta^{\beta}$-amylene** (Gorsky), 1911, A., i, 249.
δ-**Methyl-$\Delta^{\gamma}$-amylene,** α-chloro- (Henry), 1907, A., i, 106.
α-**Methyl-$\Delta^{\beta}$-amylene glycol,** preparation of (Henry), 1907, A., i, 745.
**Methylamyleneglyoxaline** (Jowett), 1903, T., 449; P., 55.
**Methyl*iso*amylethylene glycol** (Prileschaeff), 1910, A., i, 86.
**Methyl*iso*amylglycollic acid** (Grignard), 1903, A., i, 31.
**Methylamylglyoxaline,** 1:4- or 1:5-, and its salts (Jowett), 1903, T., 447; P., 55.
1-**Methyl-3-*iso*amyl*cyclo*hexane** (Mailhe and Murat), 1911, A., i, 126.
1-**Methyl-2-*iso*amyl*cyclo*hexan-2-ol** (Murat), 1909, A., i, 147.
1-**Methyl-3-*iso*amyl*cyclo*hexan-3-ol,** and its derivatives (Mailhe and Murat), 1911, A., i, 126.
1-**Methyl-3-*iso*amyl*cyclo*hexene** and its nitrosochloride (Mailhe and Murat), 1911, A., i, 126.
**Methyl *iso*amyl ketone,** electrolytic reduction of, to isoheptane (Tafel), 1909, A., i, 766.
4-**Methyl-3-*n*- and -*iso*-amylpyrazolones** (Locquin), 1904, A., i, 552.
2-**Methyl-3-*iso*amyl-4-quinazolone,** 7-amino-, acetyl derivative (Bogert, Amend, and Chambers), 1910, A., i, 895.
α-**Methylanhydroacetonebenzil,** dimorphism of (Japp and Michie), 1903, T., 276; P., 20.
β-**Methylanhydroacetonebenzil,** preparation of (Japp and Knox), 1905, T., 677.
**Methylanhydroacetonebenzils,** α- and β-, oxidation products of (Japp and Michie), 1903, T., 279; P., 21.
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**Methylaniline** (*phenylmethylamine*), absorption spectrum of (Purvis), 1910, T., 1551.

**Methylaniline** (*phenylmethylamine*), latent heat of vaporisation of (Luginin), 1903, A., ii, 7.
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  condensation of, with acetaldehydecyanohydrin (Sachs and Kraft), 1903, A., i, 335.
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  telluri-bromide and -chloride (Gutbier, Flury, and Ewald), 1912, A., i, 689.
  and dimethylaniline, detection of, in presence of each other (Emde), 1909, A., ii, 274.
**Methylaniline**, 2:4-*di*bromo-, hydrobromide perbromide (Fries), 1904, A., i, 571.
  2:4-*di*- and 2:4:6-*tri*-bromo-, and their perbromides (Fries), 1906, A., i, 646.
  bromonitro-derivatives of (Blanksma), 1903, A., i, 333.
  4:6-*di*bromo-2-nitro- and 4:6-*di*chloro-2-nitro- (Blanksma), 1908, A., i, 147.
  *o*-bromo-*p*-nitroso-, and *o*- and *m*-chloro-*p*-nitroso- (Fischer and Neber), 1912, A., i, 438.
  3:4-*di*chloro-6-nitro- (Blanksma), 1903, A., i, 334.
  ω-cyano-, preparation of (Badische Anilin- & Soda-Fabrik), 1903, A., i, 336.
**Methylaniline-2-sulphonic acid**, 4-bromo-, and the corresponding chloride and sulphinic acid (Claasz), 1911, A., i, 437.
**Methylanilinoazocyanide.** See β-Phenyl-β-methyltriazen, α-cyano-.
**Methylanilinodiazobenzene** (Vignon and Simonet), 1905, A., i, 494.
**3-Methyl-6-anilinodihydropyrazoquinazolone** (Michaelis, Krug, Leo, and Ziesel), 1910, A., i, 514.
**3-Methylanilino-1:1-dimethyl-$\Delta^3$-*cyclo*-hexenylidene-5-cyanoacetic acid**, ethyl ester (Crossley and Gilling), 1910, T., 527.
**4-Methylanilino-2:6-dimethylnicotinic acid**, ethyl ester (Michaelis and Heyden), 1909, A., i, 529.
**5-Methylanilino-1:3-dimethylpyrazole**, and its nitroso-derivative (Michaelis and Lachwitz), 1910, A., i, 642.
**α-Methylanilinodiphenylacetomethylanilide** (Klinger), 1912, A., i, 558.
**3-Methylanilino-1:4-diphenyl-4:5-dihydro-1:2:4-triazole**, 5-hydroxy-, and its additive salts (Busch and Mehrtens), 1906, A., i, 116.
**1-Methylanilino-2:5-diphenyl-1:3:4-triazole** and its *di*-*p*-bromo-derivative (Stollé), 1907, A., i, 655.
*m*-**Methyl-α-anilinoethylbenzene**, *o*-hydroxy- (Anselmino), 1907, A., i, 913.
**β-Methylanilinoethyl ethyl ketone** and its picrate and semicarbazone (Blaise and Maire), 1908, A., i, 566.
**4-Methylanilinolutidine** and its additive salts (Michaelis and Hillmann), 1907, A., i, 726.
**Methylanilino-*d*-methylenecamphor**, rotatory power of (Pope and Read), 1909, T., 179.
**1-Methylanilino-5-methyltriazole-4-carboxylic acid**, and its ethyl ester (Wolff, Bock, Lorentz, and Trappe), 1903, A., i, 206.
**5-Methylanilino-1-phenyl-3-methyl-4-antipyrinylpyrazole.** See Anti-ψ-anilopyrine.
**5-Methylanilino-1-phenyl-3-methylpyrazole**, 4-amino-, 5-*p*-chloro-, and 5-*m*- and -*p*-nitro-, and their derivatives (Michaelis and Abraham), 1911, A., i, 1038.
**5-Methylanilino-1-phenylpyrazole**, and 4-nitroso- (Michaelis and Walter), 1911, A., i, 1039.
**γ-Methylanilino-$\Delta^{\beta}$-propene-α-al**, β-chloro- (Dieckmann and Platz), 1905, A., i, 117.
**α-Methylanilinopropionamide**, *p*-nitroso-, and its condensation with benzyl cyanide, *p*-nitrobenzyl cyanide, and malononitrile (Sachs and Kraft), 1903, A., i, 335.
**α-Methylanilinopropionitrile** and *p*-nitroso- (Sachs and Kraft), 1903, A., i, 335.
**Methyl-γ-anilinopropylcarbinol** and its salts and benzoyl derivative (Markwalder), 1907, A., i, 638.
**Methyl γ-anilinopropyl ketone** and its oxime, phenylhydrazone, semicarbazone, benzoyl derivative and anhydride (Markwalder), 1907, A., i, 637.

**Methylanilinostyryl phenyl ketone** (André), 1911, A., i, 269.

**Methylanilinosuccinanil** (Warren and Grose), 1912, A., ii, 962.

**5-Methylanilino-1-*o*- and -*p*-tolyl-3-methylpyrazole** and salts (Michaelis and Risse), 1911, A., i, 1039.

**3-Methylanilino-1:4:5-triphenyl-4:5-dihydro-1:2:4-triazole,** 5-hydroxy-, and its methochloride (Busch and Mehrtens), 1906, A., i, 118.

**1-Methylanilopyrine.** See 2:5-Anilo-1:2:3-trimethylpyrazole.

*N*-**Methylanisaldoxime** and its hydrochloride and carbanilido-derivative (Beckmann and Netscher), 1909, A., i, 391.

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*N*-**Methyl-*o*-anisidine** and nitroso- (König and Becker), 1912, A., i, 495.

**Methyl-*p*-anisidine** (Fröhlich and Wedekind), 1907, A., i, 410.

and its *N*-nitro-, and *N*-nitroso-derivatives (Reverdin), 1911, A., i, 124.

**Methyl-*p*-anisidine,**2:3-,2:5-, and 3:5-*di*-nitro- (Reverdin and de Luc), 1911, A., i, 965.

**Methylanisyl-*o*-diketone,** mono- and 1:2-di-oximes of (Wieland), 1903, A., i, 837.

**1-Methylanthracene** and its picrate (Fischer and Sapper), 1911, A., i, 280.

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**1-Methylanthracene,** 4-chloro- (Fischer and Sapper), 1911, A., i, 280.

1-chlorohydroxy- (Fischer and Ziegler), 1912, A., i, 754.

*tetra*hydroxy-(Krasowsky), 1909, A., ii, 175.

**2-Methylanthracene** from emodin from Frangula (Oesterle and Tisza), 1904, A., i, 350.

from ditolyl-methane or -ethane, and 9:10-*di*-bromo- (Fischer), 1909, A., i, 563.

**2-Methylanthracene,** hydroxy-, iodo-hydriodo-derivatives (Liebermann and Mamlock), 1905, A., i, 531.

*tri*hydroxy- (Barrowcliff and Tutin), 1907, T., 1913 ; P., 249.

*iso***Methylanthracene** from Westphalian coal tar (Börnstein), 1906, A., i, 414.

**2-Methylanthracene-10-carboxylic acid** (Liebermann and Butescu), 1912, A., i, 467.

**Methylanthranil** (Brühl ; Bamberger and Elger), 1904, A., i, 93 ; (Bamberger and Lublin), 1909, A., i, 509.

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**Methylanthranilic acid,** (*o-methylaminobenzoic acid*) methyl ester (Schroeter and Eisleb), 1909, A., i, 578.

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**Methylanthranilic acid,** 3- and 5-amino-, hydrochlorides of, and 5-chloro- (Keller), 1908, A., i, 284.

4-bromo- (Ettinger and Friedländer), 1912, A., i, 729.

*di*bromo-ω-cyano-, *di*chloro-ω-cyano-, and *tetra*chloro-ω-cyano- (Badische Anilin- & Soda-Fabrik), 1910, A., i, 382.

ω-cyano- (*phenylglycine-o-carboxylic acid, nitrile of*), (Badische Anilin- & Soda-Fabrik), 1903, A., i, 336.

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**2-Methylanthrapyridone,** preparation of (Badische Anilin- & Soda-Fabrik), 1909, A., i, 835.

1-μ-**Methylanthrapyrimidine**, 2-bromo-4-amino- (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 167.
**Methylanthraquinone**, side-chain halogen substituted (Isler), 1909, A., i, 811.
**Methylanthraquinone**, *di*bromo- (Fischer), 1909, A., i, 563.
  chloro-, two isomeric forms of, *di*chloro-, and bromo- (Gesellschaft für Chemische Industrie in Basel), 1909, A., i, 941.
  *di*hydroxy-derivatives. See Morindadiol and Soranjidiol.
  *tri*hydroxy-. See Nataloe-emodin.
    monomethyl ether, and its diacetyl derivative from the wood of *Morinda citrifolia* (Oesterle), 1907, A., ii, 644.
**1-Methylanthraquinone**, 2- and 4-chloro- (Heller and Schülke), 1908, A., i, 995.
  5:8-*di*chloro-4-hydroxy-, and its acetyl derivative (Walsh and Weizmann), 1910, T., 690.
  2-hydroxy- and nitro-2-hydroxy-, and their methyl ethers (Bentley, Gardner, and Weizmann), 1907, T., 1631.
  4-hydroxy-, and its methyl ether (Bentley, Gardner, Weizmann, and Andrew), 1907, T., 1633.
  4 6(7)-*di*hydroxy- (Bentley, Gardner, and Weizmann), 1907, T., 1639.
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  nitro- (Fischer and Ziegler), 1912, A., i, 755.
  nitro-4-hydroxy- (Fischer and Ziegler), 1912, A., i, 754.
**2-Methylanthraquinone**, 5(8)- and 6(7)-amino- (Badische Anilin- & Soda-Fabrik), 1911, A., i, 885.
  1:3-*di*amino-, and 1:3:(?)*tri*amino- (Badische Anilin- & Soda-Fabrik), 1909, A., i, 243.
  2-bromo- (Heller, Grünthal, and Ruhtenberg), 1912, A., i, 358.
  bromo-, *di*bromo-, chloro-, and *di*chloro- (Badische Anilin- & Soda-Fabrik), 1910, A., i, 325.
  bromoamino- and chloroamino-derivatives (Badische Anilin- & Soda-Fabrik), 1903, A., i, 498.
  1- and 4-hydroxy-, and their potassium salts (Bentley, Gardner, and Weizmann), 1907, T., 1635.
  4:7(8)-*di*hydroxy- (Bentley, Gardner, and Weizmann), 1907, T., 1638.
**2-Methylanthraquinone**, *tri*hydroxy-. See Emodin.
  3:6:7-*tri*hydroxy-. See Emodin from Frangula.
  1-iodo- (Scholl, Holdermann, Kunz, and Mansfeld), 1907, A., i, 540.
  1-thiocyano-(Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 338; (Gattermann), 1912, A., i, 999.
1-(or 2-)**Methylanthraquinone**, 5:8-*di*chloro-2-(or 1-)hydroxy- (Walsh and Weizmann), 1910, T., 691.
**Methylanthraquinoneacridone** (Ullmann), 1910, A., i, 697.
**1:2-Methylanthraquinoneiminazole** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 141.
**Methyl-α-anthraquinonyl** sulphide and sulphoxide (Fries and Engelbertz), 1912, A., i, 1006.
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**2-Methylanthraquino-1-thiazole** (Gattermann), 1912, A., i, 1005.
**2-Methylanthraquino-1-thiophen** and its -**carboxylic acid** (Gattermann), 1912, A., i, 1004.
**2-Methyl-1-anthrathiazole** (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 338.
**4-Methyl-3-antipyrine** and its salts (Michaelis and Drews), 1907, A., i, 157.
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**Methyl-*d*-arabonolactone**, α-hydroxy-, and its phenylhydrazide, and brucine and calcium salts (Spoehr), 1910, A., i, 221.
**Methylarbutin**, properties, distinction and detection in plants of arbutin and (Bourquelot and Fichtenholz), 1910, A., i, 273.
**Methylarsine** (Auger), 1904, A., i, 724.
  *di*iodide and oxide, estimation of (Bougault), 1907, A., ii, 916.
**Methylarsinic acid** and its salts (d'Emilio), 1903, A., ii, 252.
  thermochemistry of (Baud and Astruc), 1907, A., ii, 605.
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**Methylarsinic acid**, action of, on antimony trichloride, and its antimonyl salt (Barthe and Minet), 1909, A., i, 560.
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**Methylarsinic acid**, *di*iodo- (Auger), 1908, A., i, 13.
**Methylaspartic acid**, ethyl ester (Zelinsky, Annenkoff, and Kulikoff), 1911, A., i, 773.
*l*-**Methylaspartic acid**, synthesis of (Lutz), 1910, A., i, 230.
**Methylated spirit**, composition of (Thorpe and Holmes), 1904, T., 4.
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**Methylation** in the ethylene derivatives from the point of view of volatility (Henry), 1908, A., i, 752.
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**Methylazaurolic acid** and its metallic salts (Wieland and Hess), 1909, A., i, 883.
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**5-Methylaziminolecarboxylic acid** and its ethyl ester (Wolff, Bock, Lorentz, and Trappe), 1903, A., i, 207.
**Methylazoimide** (Dimroth and Wislicenus), 1905, A., i, 422.
**Methyl*iso*azoxide**, sodium salt of, (Thiele), 1910, A., i, 889.
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**3-Methylbarbituric acid** and 4-imino- (Conrad), 1905, A., i, 751.
**5-Methylbarbituric acid** (Fischer), 1905, A., i, 122.
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*p*-**Methylbenzaldazine** (Pascal and Normand), 1912, A., i, 146.
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*N*-**Methylbenzaldoxime** hydriodides (Beckmann, Ebert, Netscher, and Schulz), 1909, A., i, 654.
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*N*-**Methylbenzaldoxime**, *p*-hydroxy- (Beckmann and Netscher), 1909, A., i, 391.
**3-Methylbenzaldoxime**, 2-amino- (Mayer), 1912, A., i, 478.
**Methylbenzamide**, hydroxy-, and its compound with *β*-naphthol and hydrochloric acid (Einhorn), 1905, A., i, 344, 345, 646.
**4-Methyl-1:2-benzanthraquinone**, 3-amino-, 3-hydroxy-, and 3-iodo- (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1912, A., i, 564.
**5-Methyl-1:2-benzanthraquinone**, and 5-bromo-, 1-nitro-, and 1-nitro-5-bromo- (Scholl and Tritsch), 1912, A., i, 36.
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*p*-**Methylbenzhydryl-acetyl-** and **-benzoyl-acetones** (Fosse), 1908, A., i, 86.
**Methylbenzhydrylamine** and its hydrochloride and nitrate (Busch and Leefhelm), 1908, A., i, 153.
*N*-**Methylbenzidine** and its salts and derivatives (Rassow and Berger), 1911, A., i, 821.
**3-Methylbenzil**, 4-hydroxy- (Blau), 1905, A., i, 905.
**Methylbenziminazole**, 4-chloro- (Ullmann and Mauthner), 1904, A., i, 192.
**1-Methylbenziminazole** and its salts (Fischer and Veiel), 1905, A., i, 245.
**1-Methylbenziminazole**, 6-nitro-, and its salts and its isomeride (Fischer and Hess), 1904, A., i, 195.

**2-Methylbenziminazole** (Borsche and Rantscheff), 1911, A., i, 330.

bromo-derivatives, and their salts (Baczyński and v. Niementowski), 1903, A., i, 124.

oxide, and its salts (v. Niementowski), 1911, A., i, 85.

**2-Methylbenziminazole,** 4:6-*di*- and *tetra*-bromo-, phthalones of (Baczyński and v. Niementowski), 1903, A., i, 126.

6-chloro- and 6-chloronitro-, and its salts (Fischer and Limmer), 1906, A., i, 895.

cyano- (Bogert and Wise), 1912, A., i, 451.

nitro-, yellow sulphur dye from (Chemische Fabriken vorm. Weiler-ter-Meer), 1905, A., i, 552.

**1-Methylbenziminazole-2-benzoic acid,** methyl and ethyl esters, and their methiodides (Rupe and Thiess), 1910, A., i, 72.

**2-Methylbenziminazole-5-carboxylic acid,** esters and hydrochloride of (Einhorn and Uhlfelder), 1910, A., i, 173.

**5-Methylbenziminazolone** (Elbs and Schuster), 1911, A., i, 192.

*N*-**Methylbenzimino-ethers** (Lander), 1903, T., 324; P., 16.

**5-Methylbenzobis-3-pyrazolone,** and 4-bromo- (Michaelis and Käding), 1910, A., i, 516.

**5-Methylbenzo***cyclo***butadiene,** 6-amino- (Nastukoff and Kroneberg), 1912, A., i, 962.

**1-Methylbenzofulvenecarboxylic acid** (Thiele and Rüdiger), 1906, A., i, 588.

**Methylbenzo***cyclo***heptadiene** (Thiele and Weitz), 1910, A., i, 854.

**Methylbenzoic acid.** See Toluic acid.

**2-Methylbenzoic acid,** 4:6-*di*hydroxy-. See Orcinolcarboxylic acid.

**4-Methylbenzoic acid,** 2:6-*di*hydroxy-. See Orsellinic acid.

**6-Methyl-1:2:3:7:9-benzopentazole,** 4-hydroxy-, and its salts (Bülow), 1910, A., i, 81.

**Methylbenzophenones.** See Phenyl tolyl ketones.

**1-Methylbenzopyrazolone** (Milrath), 1908, A., i, 1014.

**4-Methyl-1:2-benzopyrone-3-benzoyl-*o*-carboxylic acid** (4-*methyl*-1:2-*benzopyrone*-3-o-*phthalaldehydic acid*), 7-hydroxy-, and its acetate, and 5:7- and 7:8-*di*hydroxy- (Bülow and Siebert), 1905, A., i, 294.

**4-Methyl-1:2-benzopyrone-3-*o*-benzylcarboxylic acid,** 7-hydroxy-, and its acetate, and 5:7- and 7:8-*di*hydroxy- (Bülow and Siebert), 1905, A., i, 295.

**2-Methylbenzopyronium** and its salts (Decker and v. Fellenberg), 1907, A., i, 1064.

**Methylbenzoquinones.** See Toluquinones.

**Methylbenzoquinonitrole,** chloro-derivatives of (Zincke, Schneider, and Emmerich), 1903, A., i, 757.

**5-Methyl-1:2:4:9-benzotetrazole,** and 7-chloro-, and 7-hydroxy-, and their derivatives (Bülow and Haas), 1910, A., i, 595.

**5-Methyl-1:2:4:9-benzotetrazole,** 7-hydroxy- (Bülow and Weber), 1909, A., i, 615.

7-thiol (Bülow and Haas), 1910, A., i, 595.

**2-Methyl-1:3:7:9-benzotetrazole** (2-*methyl*-1:3-*triazo*-7:0′-*pyrimidine*), derivatives of (Bülow and Haas), 1910, A., i, 203.

**6-Methyl-1:3:7:9-benzotetrazole,** 4-hydroxy-, and its salts (Bülow and Haas), 1910, A., i, 80.

**7-Methylbenzotetron-3-carboxylanilide, -phenetidide** and **-phenylhydrazides.** See 7-Methylcoumarin-3-carboxylanilide, -phenetidide, and phenylhydrazides, 4-hydroxy-.

**7-Methylbenzotetron-3-ethylcarboxylamide.** See 7-Methylcoumarin-3-ethylcarboxylamide, 4-hydroxy-.

**3-Methylbenzotetronic acid.** See 8-Methylcoumarin, 4-hydroxy-.

**7-Methylbenzotetronyl** bromide. See 7-Methylcoumarin, 4-bromo-.

**1-Methylbenzothiazole,** 4-amino-, *N*-acetyl derivative of (Müller), 1907, A., i, 89.

**2-Methylbenzothiazoline,** 1-imino-, nitroso-derivative of (Besthorn), 1910, A., i, 508.

**2-Methylbenzothiazolone,** and its derivatives (Besthorn), 1910, A., i, 508.

**5-Methyl-1:2:3-benzotriazole,** 1-acyl derivatives (Fichter, Preiswerk, and Rosenberger), 1907, A., i, 84.

**6-Methyl-1:2:3-benzotriazole,** 1-crotonyl derivative (Fichter and Preiswerk), 1907, A., i, 84.

**3-Methyl-2:4-benzoxazine** (Auwers), 1904, A., i, 581.

**1-Methylbenzoxazole,** 5-hydroxy- (Henrich and Wagner), 1903, A., i, 89.

**2 Methylbenz***iso***oxazolone** (Bamberger and Pyman), 1909, A., i, 575.

**Methylbenzoylacetone.** See *α*-Phenyl-*β*-methylbutane-*αγ*-dione.

**Methylbenzoylbenzoic acids.** See Toluoylbenzoic acids.

*v*-**Methylbenzoylcarbinol** and its semicarbazone, acetate, and chloride (Auwers), 1906, A., i, 963.

**Methylbenzoylformic acid.** See Tolylglyoxylic acid.

**Methyl benzoylmethylaminobutyl ketone** (Lipp and Widnmann), 1905, A., i, 662.

**Methyl-*β*-benzylamino*iso*butylcarbinol** and its additive salts and nitroso-derivative (Kohn), 1907, A., i, 693.

*o*-, *m*-, and *p*-**Methylbenzylanilines** and their hydrochlorides (Law), 1912, T., 158.

**1-*p*-Methylbenzyl-2:3-dimethyl-5-pyrazolone** (Curtius and Sprenger), 1912, A., i, 139.

**Methylbenzyl ethyl ketone** and its semicarbazone (Tiffeneau), 1907, A., i, 406.

**4-*p*-Methylbenzylfluorene** (Pick), 1905, A., i, 68.

**Methylbenzylidene-.** See Tolylidene-.

***β*-Methyl-*γ*-benzylidenebutyric acid,** *β*-hydroxy-, ethyl ester (Kohler and Heritage), 1910, A., i, 485.

*p*-**Methylbenzylidene-*αα*′-lutidine.** See 2-*p*-Methyl-*p*-styryl-6-methylpyridine.

**3-Methyl-4-benzylidenepyrazolone-1-carbamidine** and oximino- (Schestakoff and Kazakoff), 1912, A., i, 1032.

**Methyl-*β*-benzylmethylamino*iso*butylcarbinol** and its additive salts (Kohn and Schlegl), 1907, A., i, 683.

**1-*p*-Methylbenzyl-3 methyl-5-pyrazolone,** hydrochloride and 4-oximino- (Curtius and Sprenger), 1912, A., i, 139.

**4-*p*-Methylbenzyl*iso*quinoline** and its salts (Rügheimer and Albrecht), 1903, A., i, 439.

*p*-**Methylbenzylsemicarbazide** and its derivatives and nitroso- (Kessler and Rupe), 1912, A., i, 219.

*m*-**Methylbenzyl-*p*-toluidine,** 6-amino-, derivatives of (v. Walther and Bamberg), 1905, A., i, 298; 1906, A., i, 385.

6-hydroxy-, and its picrate (v. Walther and Bamberg), 1905, A., i, 299.

*α*-**Methylberberine** salts (Freund and Mayer), 1907, A., i, 633.

*C*-**Methylbindone** (Hantzsch and Zortman), 1912, A., i, 872.

**1-Methylbrazanquinone,** 3-hydroxy- (Grafmann and v. Kostanecki), 1909, A., i, 250.

**Methyl-*γ*-bromoallylacetoacetic acid,** ethyl ester (Gardner and Perkin), 1907, T., 853; P., 116.

**Methyl-*γ*-bromoallylmalonic acid,** ethyl ester (Perkin and Simonsen), 1907, T., 830.

**Methyl *β*-bromo*iso*butyl ketone** and its semicarbazone (Rupe and Kessler), 1910, A., i, 93.

**Methylbromocamphor** (Minguin), 1903, A., i, 428.

**Methylbromocoumalic acid,** action of 1-amino-1:3:4-triazole and its 2:5-substitution products on (Bülow and Weber), 1909, A., i, 613.

**Methylbromoethylamine** hydrobromide (Knorr and Meyer), 1905, A., i, 748.

**2-Methyl-6-bromoethylpyridine** and its salts (Löffler and Thiel), 1909, A., i, 182.

***β*-Methyl-*α*-bromomethylbutyric acid,** *α*-bromo- (Blaise and Luttringer), 1905, A., i, 628.

**4-Methyl-2 bromomethylcoumarone,** 1:6-*di*bromo- (Fries and Moskopp), 1910, A., i, 334.

**5-Methyl-2-bromomethylcoumarone,** 1:4:6-*tri*bromo- (Fries and Volk), 1910, A., i, 333.

**4-Methyl-5-bromomethyldihydrouracil,** 4-bromo-5-hydroxy- (Kircher), 1912, A., i, 54.

*d*- and *l*-**1-Methyl-4-bromomethylene*cyclo*hexane,** rotatory power of (Perkin and Pope), 1911, T., 1523.

***β*-Methyl-*α*-bromomethylenehydantoin** (Gabriel), 1906, A., i, 636.

**1-Methyl-*α*-bromomethyl-3-ethylbenzene,** *α*:*β*:*β*:5-*tetra*bromo-4-hydroxy-, and its acetate (Fries and Moskopp), 1910, A., i, 334.

**1-Methyl-*α*-bromomethyl-4-ethylbenzene,** *α*:*β*:*β*:2:6-*penta*bromo-3-hydroxy- (Fries and Volk), 1910, A., i, 333.

**1-Methyl-4-bromomethyl*cyclo*hexane,** 4-bromo- (Perkin and Pope), 1911, T., 1523.

**3-Methyl-*α*-bromomethylstyrene,** *β*-5-*di*bromo-*β*-iodo-6-hydroxy-, and *β*:*β*:5-*tri*bromo-6-hydroxy-, and its acetate (Fries and Moskopp), 1910, A., i, 334.

**4-Methyl-*α*-bromomethylstyrene,** *β*:3:5-*tri*bromo-*β*-iodo-2-hydroxy-, and *β*:*β*:3:5-*tetra*bromo-2-hydroxy- (Fries and Volk), 1910, A., i, 333.

*N*-**Methylbromo*iso*papaverine** (Decker and Girard), 1904, A., i, 1045.

**1-Methyl-4-*αβ*-*di*bromopropylbenzene** and its nitrosochloride (Kunckell and Dettmar), 1912, A., i, 432.

**Methyl γ-bromopropyl ketone**, action of aniline and *p*-toluidine on (MARKWALDER), 1907, A., i, 637.
**Methyl-β-bromopropylketoxime** and its derivatives (SCHMIDT and LEIPPRAND), 1904, A., i, 278.
**Methylbrucine**, acetyl derivative of (LEUCHS and ANDERSON), 1911, A., i, 1018.
  acetate (MOSSLER), 1912, A., i, 297.
**α-Methylbutaldehyde** (*methylethylacetaldehyde*) and its derivatives (NEUSTÄDTER), 1907, A., i, 14.
**α-Methylbutaldehyde**, β-hydroxy-, action of organo-magnesium compounds on (ABELMANN), 1909, A., i, 547.
**β-Methylbutane.** See *iso*Pentane.
**Methyl*cyclo*butane**, ω-amino-, action of nitrous acid on (DEMJANOFF and LUSCHNIKOFF), 1903, A., i, 403.
  ω-hydroxy- (cyclo*butylcarbinol*) and its isomerisation to pentamethylene derivatives (DEMJANOFF), 1908, A., i, 85; 1910, A., i, 838.
**β-Methylbutane-α-al.** See *d*-Valeraldehyde.
**β-Methylbutane-αβ-diol** (*β-methylbutylene αβ-glycol*), preparation of (HENRY), 1907, A., i, 745.
**β-Methyl-$\Delta^{\alpha}$-buten-γ-ol** (FARBENFABRIKEN VORM. F. BAYER & CO.), 1911, A., i, 598.
**β-Methyl-$\Delta^{\alpha}$-buten-γ-one** (FARBENFABRIKEN VORM. F. BAYER & CO.), 1912, A., i, 414.
**1-Methyl-4-α-butenylbenzene** (KUNCKELL), 1903, A., i, 617.
**Methyl *iso*butenyl ketone.** See Mesityl oxide.
**8-Methyl-2-$\Delta^{\alpha}$- and -2-*iso*-butenylquinolines** and their additive salts (HOFFMANN), 1906, A., i, 41.
**Methyl-$\Delta^{\gamma}$-butinene ketone** and its oxime and semicarbazone (GARDNER and PERKIN), 1907, T., 851; P., 116.
  density, magnetic rotation, and refractive power of (PERKIN), 1907, T., 852.
**β-Methylbutyl alcohol**, αβ *di*bromo- (COURTOT), 1906, A., i, 789.
**Methylbutylacetic acid.** See α-Methylhexoic acid.
**α-Methyl*iso*butylacetic acid.** See α-Methyl*iso*hexoic acid.
**Methyl*iso*butylallylcarbinol** and its acetate (MARKO), 1904, A., i, 642.
**Methyl*iso*butyl*iso*allylcarbinol.** See δζ-Dimethyl-$\Delta^{\beta}$-hepten-δ-ol.
**1-Methyl-5-*iso*butyl-3-allyl-$\Delta^{1}$-*cyclo*hexen-3-ol** (MATSCHUREVITSCH), 1911, A., i, 962.
**Methyl*tert.*-butylamine** and its salts and nitroso-derivative (SABATIER and MAILHE), 1907, A., i, 490.
**δ-Methyl-β-*iso*butylamylamine** and its carbamide and phenylcarbamide (FREYLON), 1910, A., i, 296.
**_N_-Methylbutylaniline** (FRÖHLICH and WEDEKIND), 1907, A., i, 512.
**_N_-Methyl*iso*butylaniline** (THOMAS and JONES), 1906, T., 292.
**_N_-Methyl*iso*butylaniline**, *p*-bromo-, and its salts (HILL), 1907, A., i, 692.
**α-Methylbutylbenzene** (sec.-*amylbenzene*) (KLAGES and HAHN), 1903, A., i, 20.
  and its derivatives (KLAGES), 1904, A., i, 27.
**γ-Methylbutylbenzene**, γ-hydroxy-, and its phenylurethane (KLAGES), 1904, A., i, 569.
**3-Methyl-5-*tert.*-butylbenzoic acid** and its salts and ethyl ester (KONOWALOFF and ORLOFF), 1904, A., i, 499.
**Methyl*tert.*-butylbenzoylacrylic acids** (KOZAK), 1907, A., i, 403.
**Methyl-*n*-butylcarbinol**, hydrogen succinate of (PICKARD and KENYON), 1911, T., 59.
*d*-**Methyl-*n*-butylcarbinol**, and its salts (PICKARD and KENYON), 1911, T., 60, 65.
**Methyl*iso*butylcarbinol** and its iodide (CLARKE and SHREVE), 1906, A., i, 473.
  formation of (GUERBET), 1909, A., i, 690.
  hydrogen succinate of (PICKARD and KENYON), 1911, T., 59.
*d*- and *l*-**Methyl*iso*butylcarbinol** and their derivatives (PICKARD and KENYON), 1911, T., 60.
**Methyl*tert.*-butylcarbinol** (sec.-*pinacolyl alcohol*) and its acetate, bromide, and urethane (DELACRE), 1907, A., i, 459, 579.
  action of acetyl chloride on (HENRY), 1906, A., i, 329; (DELACRE), 1906, A., i, 551.
**Methyl*cyclo*butylcarbinol** and its phenylurethane (ZELINSKY and GUTT), 1908, A., i, 618.
**β-Methyl-$\Delta^{\alpha}$-butylene** (as-*methylethylethylene*), formation of (WALKER and WOOD), 1906, T., 603; P., 104.
  additive power of (BRUNEL and PROBECK), 1910, A., i, 805.
  α-chlorohydrin (FOURNEAU and TIFFENEAU), 1907, A., i, 818.
  αβ-oxide (RIEDEL), 1908, A., i, 956.
**β-Methyl-$\Delta^{\beta}$-butylene** (*trimethylethylene*), and its dibromide (BLAISE and COURTOT), 1906, A., i, 793.

**β-Methyl-$\Delta^{\beta}$-butylene** (*trimethylethylene*), fixation of methyl alcohol on (Reychler), 1907, A., i, 275.
  compounds of, with benzaldehyde and ketones, physical constants of (Paternò and Traetta-Mosca), 1909, A., i, 487.
  α-chlorohydrin (Fourneau and Tiffeneau), 1907, A., i, 818.
  βγ-glycol (Ciamician and Silber), 1911, A., i, 514, 650.
  nitrosite (Schmidt), 1903, A., i, 3; (Hantzsch), 1903, A., i, 61.
  nitrosate, and nitrosochloride (Schmidt), 1903, A., i, 597.
**β-Methyl-$\Delta^{\beta}$-butylene,** γ-bromo- (Schmidt and Austin), 1903, A., i, 597.
  γ-nitroso-, polymeric (Schmidt and Leipprand), 1904, A., i, 279.
**Methyl-*n*- and -*iso*butylglutaconimides,** cyano-, ammonium derivatives of (Guareschi), 1905, A., i, 822.
**1-Methyl-4-*tert.*-butyl*cyclo*hexaneacetic acid** and its ethyl ester and chloride, and hydroxy- (Darzens and Rost), 1911, A., i, 989.
**1-Methyl-3-*iso*butyl*cyclo*hexan-3-ol** (Mailhe and Murat), 1911, A., i, 126.
**1-Methyl-2-*tert.*-butyl*cyclo*hexan-2-ol** (Murat), 1909, A., i, 147.
**ε-Methyl-γ-*iso*butylhexan-β-one,** and its oxime and semicarbazone (Freylon), 1910, A., i, 359.
**1-Methyl-3-*tert.*-butyl*cyclo*hexan-6-one** (Darzens and Rost), 1911, A., i, 290.
**Methyl butyl ketone** (*propylacetone*), semicarbazone of (Bouveault and Locquin), 1905, A., i, 18.
**Methyl butyl ketone,** *iso*nitroso- (Knorr and Hess), 1911, A., i, 1019.
**Methyl *iso*butyl ketone** (iso*propylacetone*) (Clarke and Shreve), 1906, A., i, 473.
  its polymeride and semicarbazone (Grignard), 1903, A., i, 141.
  condensation of, with benzil (Japp and Knox), 1905, T., 673; P., 152.
**Methyl *tert.*-butyl ketone.** See Pinacolin.
**Methyl *cyclo*butyl ketone** and its semicarbazone (Zelinsky and Gutt), 1908, A., i, 618.
**α-Methylbutylmalonamic acid** (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 259.
**Methylbutylmalonic acid** and its esters (Rosetti), 1905, A., i, 561.
**Methylbutylmalonic acid,** δ-cyano- (Best and Thorpe), 1909, T., 706.
**Methyl*tert.*-butyl*di*nitromethane** (Scholl, Weil, and Holdermann), 1905, A., i, 182.
**5-Methyl-3-*tert.*-butyl*iso*oxazole** and its phenylhydrazone (Couturier), 1910, A., i, 362.
**δ-Methyl-β-*iso*butylpentanol,** pyruvate and its semicarbazone and phenylurethane (Freylon), 1910, A., i, 359.
**Methyl*iso*butylpinacone** (Clarke and Shreve), 1906, A., i, 473.
**3-Methyl-4-*sec.*-butyl-5-pyrazolone** (Locquin), 1906, A., i, 928.
**Methyl*iso*butyluracil** (Bückendorff), 1912, A., i, 55.
**γ-Methyl-α-*iso*butylvaleric acid,** derivatives of (Freylon), 1910, A., i, 353.
  α-cyano-, and its ethyl ester (Freylon), 1910, A., i, 296.
**α-Methyl-δ-*n*-butylvalerolactone,** hydrazine compound of (Blaise and Luttringer), 1905, A., i, 330.
**γ-Methyl-α-*iso*butylvaleronitrile** (Freylon), 1910, A., i, 296.
**3-Methyl-8-*iso*butylxanthine** (Traube and Nithack), 1906, A., i, 215.
**α-Methylbutyric acid** (*methylethylacetic acid; hydrotiglic acid*) and its esters and nitrile (Neustädter), 1907, A., i, 15.
  Marckwald's asymmetric synthesis of (Tymstra), 1905, A., i, 257.
**α-Methylbutyric acid,** α-amino-, and its salts (v. Gulewitsch and Wasmus), 1906, A., i, 409.
    α-chloroacetyl and α-glycyl derivatives (Rosenmund), 1910, A., i, 68.
  *l*-α-amino- (iso*valine*) (Ehrlich and Wendel), 1908, A., i, 269.
  β-*mono*- and αβ-*di*-bromo- and β-iodo- (Blaise and Luttringer), 1905, A., i, 627.
  α-cyano-, and its ethyl ester (Henle and Haakh), 1909, A., i, 7.
  α-hydroxy-, 1-phenyl-2:3-dimethyl-5-pyrazolone ester (Riedel), 1910, A., i, 434.
  β-hydroxy-, phenylurethane of (Blaise and Herman), 1910, A., i, 534.
α- and **β-Methylbutyric acids,** menthyl esters (Rupe and Busolt), 1909, A., i, 928.
**α-Methylbutyrolactone,** hydrazine compound of (Blanc), 1905, A., i, 681.
**γ-Methylbutyrolactone,** hydrazine compound of (Blaise and Luttringer), 1905, A., i, 329.
**α-Methylbutyronitrile,** α-hydroxy- (Ultée), 1906, A., i, 6.
**3-Methyl-*n*-butyrophenone,** 6-hydroxy- and its ethyl ether (Auwers), 1904, A., i, 66.

**Methylbutyrylacetoacetic acid,** esters (Bouveault and Bongert), 1903, 1903, A., i, 145.

**Methylbutyrylacetone** and its copper derivative (Bouveault and Bongert), 1903, A., i, 142.

α-**Methylbutyrylcarbamide** (Fischer and Dilthey), 1905, A., i, 38.

β-**Methylbutyrylcarbamide** (Gebrüder von Niessen), 1903, A., i, 798.

β-**Methylbutyrylphenyl-hydrazide** and -**methylhydrazide** (Schwarz), 1903, A., i, 853.

**8-Methylcaffeine,** *mono-*, *di-*, and *tri*-chloro- (Boehringer & Söhne), 1904, A., i, 340.

**1-Methylcaffolide** (Biltz and Topp), 1911, A., i, 692.

**Methylcamphenilol** (Moycho and Zienkowski), 1905, A., i, 712.
reactions of (Bouveault and Blanc), 1905, A., i, 222; (Moycho and Zienkowski), 1905, A., i, 654.

**Methylcamphoformeneamine** and its **carboxylic acid,** methylamine salt (Tingle and Hoffmann), 1905, A., i, 800.

**Methylcamphoformeneaminecarboxylic acid** (Tingle and Robinson), 1906, A., i, 903.

**Methylcampholenone** (Béhal), 1904, A., i, 514.

**Methylcampholenonitrile** (Glover), 1908, T., 1299; P., 152.

**Methylcamphor,** bromo- (Minguin), 1903, A., i, 428.

α-**Methylcamphor,** preparation of, and its bromo-derivatives and β-**sulphonic acid** and its derivatives, and oxime (Glover), 1908, T., 1289; P., 151.
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**Methylcamphorcarboxylic acid** and its esters (Brühl), 1903, A., i, 6.
isomeric methyl esters (Minguin), 1904, A., i, 138.

**Methylcarbamic acid,** methylammonium salt (Fichter and Becker), 1912, A., i, 15.

**Methylcarbamide,** decomposition of (Fawsitt), 1904, T., 1581; P., 126, 203.
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**Methylcarbamides,** binary solution equilibrium between phenol and the (Kremann, Daimer, Gugl, and Lieb), 1910, A., ii, 943.
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**Methylcarbamidecarboxylic acid,** esters of (Mauguin), 1911, A., i, 358.

**1-Methylcarbamido-2:5-dimethylpyrrole-3:4-dicarboxylic acid** and its ethyl ester (Bülow, Riess, and Sautermeister), 1905, A., i, 661.

**2-Methylcarbazole** and its picrate (Borsche, Witte, and Bothe), 1908, A., i, 367.

**Methylcarbazoles,** 1- and 3-, and their picrates (Delétra and Ullmann), 1904, A., i, 270.

**3-Methylcarbazolecarboxylic acid** (Borsche and Feise), 1907, A., i, 243.

**9-Methylcarbazole-3:6-diphthaloylic acid** and its dimethyl ester (Ehrenreich), 1912, A., i, 130.

**9-Methylcarbazole-3-phthaloylic acid** and its methyl ester (Ehrenreich), 1912, A., i, 130.

**Methylcarbazoline,** 4- or 2-, and its additive salts (Plancher and Carrasco), 1904, A., i, 778.

**3-Methylcarbazone,** formation of, and its reactions (Borsche and Feise), 1907, A., i, 242.

**3-Methylcarbazyl methyl ketone** (Borsche and Feise), 1907, A., i, 243.

**Methylcarbimide** (*methyl* iso*cyanate*), chloro- (Schroeter), 1909, A., i, 774.

**Methylcarbithionic acid.** See Acetic acid, *di*thio-.

*o*-**Methylcarbonatobenzoic acid** (Fischer), 1909, A., i, 162.

*p*-**Methylcarbonatobenzoic acid** and its chloride (Fischer), 1908, A., i, 892.

*p*-**Methylcarbonatobenzophenone** (Fischer), 1909, A., i, 310.

*o*-**Methylcarbonatobenzoyl chloride** (Fischer), 1909, A., i, 162.

*p*-**Methylcarbonatobenzoylglycine,** ethyl ester (Fischer), 1908, A., i, 892.

*p*-**Methylcarbonatobenzoylmorphine** and its hydrochloride (Riedel), 1910, A., i, 765.

*o*-**2-Methylcarbonatobenzoyloxybenzoic acid** (Einhorn, Haas, v. Bagh, Ladisch, and Rothlauf), 1911, A., i, 302.

*p*-**Methylcarbonatobenzoyloxybenzoic acid** (Fischer), 1909, A., i, 161.

*o*-**Methylcarbonatocinnamic acid** and its chloride (Fischer), 1909, A., i, 162.

**Methylcarbonato-derivatives** of amino-acids (Fischer), 1908, A., i, 544.

**Methylcarbonatodi-*o*-coumaric acid** (Fischer and Hoesch), 1912, A., i, 859.

**Methylcarbonatodiferulic acid** (Fischer and Hoesch), 1912, A., i, 859.
**4-Methylcarbonato-2:6-dimethoxybenzoic acid**, and its methyl ester (Fischer and Pfeffer), 1912, A., i, 559.
**Methylcarbonatoferulic acid** and its chloride (Fischer and Hoesch), 1912, A., i, 859.
**4-Methylcarbonatoferuloyloxybenzoic acid** (Fischer and Hoesch), 1912, A., i, 859.
**5-Methylcarbonato-2-hydroxybenzoic acid**, methyl ester (Fischer and Pfeffer), 1912, A., i, 559.
**3-Methylcarbonato-4-hydroxybenzoic acid** (Fischer and Freudenberg), 1911, A., i, 875.
**4-Methylcarbonato-2:6-*di*hydroxybenzoic acid** (Fischer), 1910, A., i, 248.
**3-Methylcarbonato-4:5-*di*hydroxybenzoic acid** (Fischer and Freudenberg), 1912, A., i, 887.
**Methylcarbonato-2-hydroxybenzoic acids**, 4- and 5- (Fischer), 1909, A., i, 162.
*p*-**Methylcarbonatohydroxybenzoyl** chloride (Fischer and Freudenberg), 1912, A., i, 472.
**5-Methylcarbonato-3-hydroxy-*o*-toluic acid.** See Methylcarbonato-orsellinic acid.
**4-Methylcarbonato-3-methoxybenzaldehyde** (Fischer and Freudenberg), 1910, A., i, 267.
**4-Methylcarbonato-3-methoxybenzoic acid** and its chloride (Fischer and Freudenberg), 1910, A., i, 266.
4- and **5-Methylcarbonato-2-methoxybenzoic acids**, methyl esters (Fischer and Pfeffer), 1912, A., i, 559.
**4-Methylcarbonato-3-methoxybenzoylaminoacetic acid**, ethyl ester (Fischer and Freudenberg), 1910, A., i, 267.
**4-Methylcarbonato-3-methoxybenzoyldi-*p*-oxybenzoyl-*p*-oxybenzoic acid** (Fischer and Freudenberg), 1910, A., i, 267.
**4-Methylcarbonato-3-methoxybenzoyl-*p*-oxybenzoic acid** and its chloride (Fischer and Freudenberg), 1910, A., i, 266.
**4-Methylcarbonato-3-methoxybenzoyl-*p*-oxybenzoyl-*p*-oxybenzoic acid** and its chloride (Fischer and Freudenberg), 1910, A., i, 267.
**4-Methylcarbonato-3-methoxybenzoylvanillin** (Fischer and Freudenberg), 1910, A., i, 267.
α-**Methylcarbonato-β-naphthoic acid** and its chloride (Fischer and Hoesch), 1912, A., i, 859.
**2-Methylcarbonato-3-naphthoic acid** and its chloride (Fischer and Hoesch), 1912, A., i, 859.
**4-α-Methylcarbonatonaphthoyloxybenzoic acid** (Fischer and Hoesch), 1912, A., i, 859.
**2:2′Methylcarbonato-3′-naphthoyloxy-3-naphthoic acid** (Fischer and Hoesch), 1912, A., i, 859.
**4-Methylcarbonato-3:5-*di*nitro-1-propylbenzene** (Thoms and Drauzburg), 1911, A., i, 716.
**Methylcarbonato-orsellinic acid** (*5-methylcarbonato-3-hydroxy-o-toluic acid*) and its methyl ester, and their β-methyl ethers (Fischer and Hoesch), 1912, A., i, 869.
**Methylcarbonatosalicyluric acid** (Fischer), 1909, A., i, 162.
**3-Methylcarbostyril** (Ornstein), 1907, A., i, 444.
**2-Methyl*iso*carbostyril-4-carboxylic acid** and its ethyl ester (Dieckmann and Meiser), 1908, A., i, 895.
**4-Methyl-2′-carboxydiphenyl sulphoxide** (Mayer), 1910, A., i, 261.
**Methylcarbylamine, action of azoimide** on (Oliveri-Mandalà), 1910, A., i, 343.
**2-Methylcarvenene** (Rupe and Emmerich), 1908, A., i, 556.
**2-Methylcarveol.** See 2-Methyl-$\Delta^{6,8(9)}$-menthadiene-2-ol.
**Methylcatechol** carbonate (Pauly), 1909, A., i, 165.
    *di*chloro- (Delange), 1907, A., i, 700.
**3′-Methylchalkone**, 4′-hydroxy-. See *m*-Tolyl styryl ketone, *p*-hydroxy-.
**Methylchavicol from Javanese basilicum oil, and its isomerides** (van Romburgh), 1909, A., i, 597.
    α- and β-nitrosites (Rimini), 1905, A., i, 198.
    compounds of, with mercury salts (Balbiano, Paolini, and Tonazzi), 1904, A., i, 73.
**Methylchitoside** (Neuberg and Neimann), 1903, A., i, 74.
**Methylchloroacetamide**, hydroxy- (Einhorn), 1905, A., i, 345.
*p*-**Methyl-α-chlorobenzyldeoxybenzoin** (Klages and Tetzner), 1903, A., i, 100.
*d*-**1-Methyl-4-chlorobromomethyl*cyclo*hexane, 4-chloro-** (Perkin and Pope), 1911, T., 1528.

**4-Methyl-2-*tri*-γ-chloro-αβ-*di*bromopropylquinoline** and its hydrochloride (SPALLINO and CUCCHIARONI), 1912, A., i, 582.

**Methyl*tri*chlorocarbamide** (CHATTAWAY and WÜNSCH), 1909, T., 131.

**Methyl*di*chlorodiacetimide** (BERGELL and FEIGL), 1908, A., i, 141.

**Methylchloroethylamine salts** (KNORR and MEYER), 1905, A., i, 748.

**1-Methyl-4-ββ-*di*chloroethylbenzene,** formation of (AUWERS and KEIL), 1904, A., i, 26.

**1-Methyl-4-ββ-*di*chloroethylbenzene,** 5-chloro- (AUWERS), 1911, A., i, 383.

**Methyl αβ-*di*chloro- and -*di*bromo-ethyl ketones** (SCHLOTTERBECK), 1909, A., i, 553.

**Methylchloromethylalkylcarbinols** (RIEDEL), 1906, A., i, 632.

**3-Methyl-5-chloromethylbenzoic acid,** 2-hydroxy- (ANILINFARBEN- and EXTRAKT-FABRIKEN VORM. J. R. GEIGY), 1911, A., i, 978.

**4-Methyl-4-*di*chloromethyl-1-ethyl*cyclo*hexadien-1-ol** (AUWERS), 1905, A., i, 434.

**1-Methyl-1-*di*chloromethyl-4-ethyl-$\Delta^3$-*cyclo*hexen-2-one** (AUWERS and V. DER HEYDEN), 1909, A., i, 593.

**4**(or **5**)**-Methyl-5**(or **4**)**-chloromethylglyoxaline** and its hydrochloride (EWINS), 1911, T., 2056 ; P., 259.

**1-Methyl-1-*di*chloromethyl*cyclo*hexadiene-$\Delta^4$-acetic acid,** and its ethyl ester (AUWERS), 1911, A., i, 298.

**1-Methyl-1-*di*chloromethyl*cyclo*hexadiene-4-acetic acid,** 4-hydroxy-, and its ethyl ester (AUWERS), 1911, A., i, 298.

**1-Methyl-1-*di*chloromethyl*cyclo*hexadien-2-one** and its semicarbazone (AUWERS and KEIL), 1903, A., i, 100.

**1-Methyl-1-*di*chloromethyl-$\Delta^{2:5}$-*cyclo*hexadien-4-one** and its semicarbazone (AUWERS and KEIL), 1903, A., i, 100.
  action of phosphorus pentachloride on (AUWERS and KEIL), 1905, A., i, 445.

**1-Methyl-1-*di*chloromethyl-$\Delta^{2:5}$-*cyclo*hexadien-4-one,** 5-chloro-, and its semicarbazone, and 3:5-*di*chloro- (AUWERS), 1911, A., i, 383, 384.

**1-Methyl-1-*tri*chloromethyl-$\Delta$-$^{2:5}$*cyclo*hexadien-4-one** and its oxime, and the acetyl derivative and phenylhydrazone of the oxime (ZINCKE and SUHL), 1907, A., i, 38.

**1-Methyl-1-*di*chloromethyl*cyclo*hexan-4-one,** 2:3:5:6-*tetra*chloro- (AUWERS), 1911, A., i, 384.

**1-Methyl-1-*di*chloromethyl-$\Delta^2$-*cyclo*hexen-4-one,** 5:6-*di*chloro- (AUWERS), 1911, A., i, 383.

**Methyl*di*chloromethylmalonic acid,** ethyl ester (KÖTZ and ZÖRNIG), 1907, A., i, 112.

**1-Methyl-1-*di*chloromethyl-4-methylene-$\Delta^{2:5}$-*cyclo*hexadiene,** 3-chloro-, and 3:5-*di*chloro- (AUWERS), 1911, A., i, 383, 384.

**4-Methyl-4-*di*chloromethyl-1-methylene-** and **-ethylidene-*cyclo*hexadienes** (AUWERS and HESSENLAND), 1907, A., i, 400.

**1-Methyl-1-*di*chloromethyl-4-*iso*propyl-$\Delta^3$-*cyclo*-hexen-2-one** (AUWERS and V. DER HEYDEN), 1909, A., i, 593.

**1-Methyl-1-*di*chloromethyl-4-*iso*propyl-$\Delta^2$-*cyclo*hexen-6-one** (AUWERS and V. DER HEYDEN), 1909, A., i, 593.

**Methylchlorophyllides** (WILLSTÄTTER and STOLL), 1912, A., i, 286.

**4-Methyl-2-*tri*-γ-chloropropenylquinoline** (SPALLINO and CUCCHIARONI), 1912, A., i, 582.

**1-Methyl-4-*di*chloro*iso*propylbenzene** (AUWERS), 1905, A., i, 434.

**Methyl α-chloropropyl ketone,** preparation of (KORSCHUN), 1908, A., i, 502.

**Methylchloro*iso*propylketoxime** (SCHMIDT and AUSTIN), 1903, A., i, 3.

**4-Methyl-1-chloropropyluracil** (MAJIMA), 1908, A., i, 223.

**α-Methylcholine** and its salts and derivatives (MENGE), 1912, A., i, 74, 949.

**2-Methylchroman** (STOERMER and SCHÄFFER), 1903, A., i, 848.

**2-Methylchromone,** 5:7-*di*hydroxy-, and its acetyl derivative (JOCHUM and V. KOSTANECKI), 1904, A., i, 608.
  7:8-*di*hydroxy-, and its diacetyl derivative (BLUMBERG and V. KOSTANECKI), 1903, A., i, 645.

**2-Methylchromone-6-carboxylic acid,** 7-hydroxy- (LIEBERMANN and LINDENBAUM), 1909, A., i, 404.

**Methylchrysophanic acid,** so-called (OESTERLE and JOHANN), 1910, A., i, 860.

**Methylcincholeupone,** nitrile, and its additive derivatives (RABE and ACKERMANN), 1907, A., i, 546.

**Methylcinchonic acids.** See Methylquinolinecarboxylic acids.

**Methyl-cinchonine** and **-cinchonidine,** identity of (RABE), 1909, A., i, 408.

**Methylcinchonine,** *iso*nitroso-, and its additive salts (ROHDE and SCHWAB), 1905, A., i, 228.

**1-Methylcinchotintoxine**, oxime of, and its transformation by the Beckmann reaction (Koenigs, Bernhart, and Ibele), 1907, A., i, 717.

**Methylcinchotoxine** and its picrate, picrolonate, and semicarbazone (Rabe and Braasch), 1909, A., i, 408.
  methiodide and its benzoyl derivative (Rabe, Schneider, and Braasch), 1908, A., i, 361.
  oxime of, and its transformation by the Beckmann reaction (Koenigs, Bernhart, and Ibele), 1907, A., i, 345, 717.

**Methylcinene** and its hydrobromide (Rupe and Schlochoff), 1905, A., i, 415.

α-**Methylcinnamic acid**, action of hydroxylamine on (Posner), 1904, A., i, 161.
  reactions of, with organo-magnesium compounds (Kohler), 1907, A., i, 139.

β-**Methylcinnamic acid** and its derivatives (Schroeter), 1904, A., i, 415; 1907, A., i, 530.
  menthyl ester (Rupe and Busolt), 1909, A., i, 927.

β-**Methylcinnamic acid**, 2:5-*di*hydroxy- (Borsche), 1907, A., i, 622.

*p*-**Methylcinnamic acid.** See *p*-Tolylacrylic acid.

β-**Methylcinnamic acids**, isomeric (Tiffeneau), 1904, A., i, 499.

β-**Methylcinnamoylanilide** (Henrich and Wirth), 1904, A., i, 431.

β-**Methylcinnamylideneacetic acid** (Kohler and Heritage), 1910, A., i, 485.

**Methylcitraconanil** (Fichter and Goldhaber), 1904, A., i, 648.

**Methylcitrazinic acids**, 3- and 5-, formation of (Rogerson and Thorpe), 1906, T., 643; P., 87.

**Methylcodeine** methiodide (Pschorr, Dickhäuser, and D'Avis), 1911, A., i, 908.

**Methyl*iso*codeine** methiodide (Pschorr and Dickhäuser), 1912, A., i, 578.

**Methylcodeinium** salts (Gerber), 1911, A., i, 154.

*N*-**Methylcœramidonol** and its ethers (Decker and Schenk), 1906, A., i, 690.

**14-Methyl-cœroxone-9-ol** and its ethyl ether and **-cœroxonium** ferrichloride (Decker, v. Fellenberg, and Stern), 1907, A., i, 1066.

**14-Methyl-cœrthionium** ferrichloride, **-cœrthione-9-ol**, and **-cœrthiene-10-ol** (Decker, v. Fellenberg, and Wuersch), 1907, A., i, 1066.

**2-Methylconidine** (Löffler and Plöcker), 1907, A., i, 437.

**3-Methylconidine** and its salts (Löffler and Grosse), 1907, A., i, 439.

**8-Methylconidine** and its derivatives (Löffler and Remmler), 1910, A., i, 633.

2- and *iso*-**2-Methylconidine** and their salts (Löffler), 1909, A., i, 326.

**Methylconiine** and its additive salts (v. Braun), 1905, A., i, 812.

**4-Methylcoumaran** (Stoermer and Göhl), 1903, A., i, 848.

**4-Methylcoumarandione**, phenylhydrazones of, and their derivatives (Auwers and Apitz), 1911, A., i, 585.

4- and **5-Methylcoumarandiones** (Fries), 1909, A., i, 175.

**1-Methylcoumaranone** (Stoermer and Atenstädt), 1903, A., i, 42.

**4-Methylcoumaran-2-one**, derivatives of (Fries and Finck), 1909, A., i, 43; (Auwers and Müller), 1909, A., i, 45.

**5-Methylcoumaranone**, derivatives of (Fries and Finck), 1909, A., i, 44.

(1)-**4-Methylcoumaranonyl-3-indole** (Fries and Finck), 1909, A., i, 45.

*o*-**Methylcoumaric acid** dibromide and its alkyloxy-derivatives (Werner, Schorndorff, and Chorower), 1906, A., i, 181.

**4-Methyl-*o*-coumaric acid**, ethyl ester (Fries and Klostermann), 1908, A., i, 822.

α- and β-**Methyl-*o*-coumaric acids** (Fries and Volk), 1911, A., i, 203.

**Methylcoumarilic acid**, 4-chloro-, ethyl ester, and 4-hydroxy-, and its ether (Stoermer and Oetker), 1904, A., i, 245.

**2-Methylcoumarilic acid** and 4-*mono*- and 4:6-*di*-bromo-, and their salts (Peters and Simonis), 1908, A., i, 340.

**4-Methylcoumarilic acid**, 2-hydroxy-, ethyl ester, and its salts (Auwers), 1912, A., i, 1010.

**3-Methylcoumarin**, synthesis of (Baidakowsky), 1906, A., i, 178.

**4-Methylcoumarin** and its bromo-derivatives (Peters and Simonis), 1908, A., i, 339.

**4-Methylcoumarin**, 6- and 7-chloro-, formation of (Clayton), 1908, T., 2021.
  6-hydroxy-, and its acyl-, bromo-, and nitro-derivatives (Borsche), 1907, A., i, 622.

**6-Methylcoumarin** and nitro- (Clayton), 1911, P., 246.

**6-Methylcoumarin**, 6-chloro- (Stoermer and Oetker), 1904, A., i, 245.

3-cyano-4-hydroxy-, and its silver and sodium salts (Anschütz and Sieben), 1909, A., i, 665.

4-hydroxy-, and its ethyl ether (Anschütz and Sieben), 1909, A., i, 665.

**7-Methylcoumarin** (Fries and Klostermann), 1906, A., i, 276; (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 644.

and its additive salts, oxime, and phenylhydrazone (Clayton), 1908, T., 526; P., 26.

**7-Methylcoumarin**, 6-amino- (Clayton), 1910, T., 1352.

4-bromo- (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 664.

3-cyano-4-hydroxy-, and its methyl, ethyl, and propyl ethers, and silver, and sodium salts (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 664.

4-hydroxy-, and its methyl, ethyl, and propyl ethers, silver salt, and acetate (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 664.

6- and 8-nitro- and 3:6-*di*nitro-(Clayton), 1910, T., 1397.

**8-Methylcoumarin**, 4-hydroxy-(3-*methylbenzotetronic acid*) (Anschütz and Scholl), 1911, A., i, 316.

**Methylcoumarins**, 5-, 6-, 7-, and 8-, and their 3-acetyl derivatives and their oximes, phenylhydrazones, and semicarbazones and carboxylic acids and their ethyl esters (Chuit and Bolsing), 1906, A., i, 185.

**7-Methylcoumarin-4-acetic acid**, and its esters (Fries and Volk), 1911, A., i, 204.

**7-Methylcoumarin-3-carboxyl-anilide** and **-phenetidide**, 4-hydroxy- (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 663.

**6-Methylcoumarin-3-carboxylic acid**, 4-hydroxy-, ethyl ester, and its ethyl ether, and metallic derivatives (Anschütz and Sieben), 1909, A., i, 665.

**7-Methylcoumarin-3-carboxylic acid**, 4-chloro-, ethyl ester (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 663.

4-hydroxy-, ethyl ester, and its metallic salts and acetate (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 663.

6-, 7-, and **8-Methylcoumarin-3-carboxylic acids**, 4-hydroxy-, methyl esters (Anschütz and Scholl), 1911, A., i, 316.

**7-Methylcoumarin-3-carboxyl-phenyl-** and **phenylmethyl-hydrazides**, 4-hydroxy- (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 663.

**7-Methylcoumarin-3-ethylcarboxylamide**, 4-hydroxy- (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 663.

**1-Methylcoumarone**, 4-nitro-, and 4:6-*di*nitro- (Hale), 1912, A., i, 567.

**4-Methylcoumarone**, 4-hydroxy-, and its phenylurethane (Stoermer and Oetker), 1904, A., i, 245.

**Methylcoumarones**, 1- and 2- (Boes), 1909, A., i, 42.

**1-Methylcoumaranone-1-carboxylic acid**, ethyl ester (Auwers), 1912, A., i, 1009.

**Methylcreatinine** and its additive salts (Korndörfer), 1905, A., i, 152.

**β-Methylcrotonic acid**, γ-cyano-, ethyl ester (Rogerson and Thorpe), 1905, T., 1687.

α- and **β-Methylcrotonic acids**, menthyl esters (Rupe and Busolt), 1909, A., i, 928.

**Methylcrotonylcarbinol.** See $\Delta^{\epsilon}$-Hexene, β-hydroxy-.

*N*-**Methylcumidine** and its additive salts and benzoyl derivative (Sachs and Weigert), 1907, A., i, 1046.

*N*-**Methylcuminaldoxime** and its hydrochloride (Beckmann and Netscher), 1909, A., i, 391.

**Methyl-α-cyanoethylaniline.** See α-Methylanilinopropionitrile.

**1-*p*-Methyl-ω-cyanomethylaminophenyl-2:4-dimethyl-3-hydroxymethyl-5-pyrazolone** (Farbwerke vorm. Meister Lucius, & Brüning), 1910, A., i, 340.

**1-Methyl-4-** and **-5-cyanomethylglyoxaline** and their salts (Pyman), 1911, T., 2179; P., 275.

**4(or 5)-Methyl-5(or 4)-cyanomethylglyoxaline** and its salts (Ewins), 1911, T., 2056; P., 259.

**Methylcyano*iso*propylketoxime** and its benzoyl derivative (Schmidt and Austin), 1903, A., i, 2.

**2-Methyl-*p*-cymene** and its **sulphonic acids** (Klages and Sommer), 1906, A., i, 566.

optical constants of (Klages), 1907, A., i, 598.

**3-Methylcytosine** and its picrate and platinichloride (Johnson and Clapp), 1908, A., i, 836.

**4-Methylcytosine**, synthesis of, and its additive salts (JOHNS), 1908, A., i, 917.
  formation of purine derivatives from, and 5-nitro- (JOHNS), 1909, A., i, 191.
**5-Methylcytosine** and its additive salts and acetyl derivative (WHEELER and JOHNSON), 1904, A., i, 624.
**Methyl damascenine** and its additive salts and nitroso-compound (KELLER), 1908, A., i, 283.
**β-Methyl-$\Delta_{\alpha\gamma}$-decadiene** (HARDING, WALSH, and WEIZMANN), 1911, T., 450.
**6-Methyldecahydroquinoline** and its hydrochloride and thiocarbamide (FINGER and BREITWIESER), 1909, A., i, 512.
**Methyl-*n*-decylcarbinol** (PICKARD and KENYON), 1911, T., 58.
***d*-Methyl-*n*-decylcarbinol** and its hydrogen phthalate and brucine salt of the latter (PICKARD and KENYON), 1911, T., 60.
***N*-Methylde*iso*dihydrohydrastinine** and its salts (FREUND and SHIBATA), 1912, A., i, 488.
***N*-Methyldehydrocotarnine** methiodide (FREUND and OPPENHEIM), 1909, A., i, 411.
*cyclo*-**2-Methyldehydrohexamethyleneimine** picrate (GABRIEL), 1909, A., i, 493.
**2-Methyldeoxybenzoin,** 4-hydroxy- (BLAU), 1905, A., i, 906.
**3-Methyldeoxybenzoin**, 4-hydroxy-, and its bromo-, iodo-, and acetyl derivatives and oxime (BLAU), 1905, A., i, 905.
**3-Methyldeoxybenzoin-2-carboxylic acid** (MÜLLER), 1909, A., i, 159.
**Methyldeoxycodeine** methiodide (KNORR and WAENTIG), 1907, A., i, 958.
**Methyldeoxydihydrocodeine** methiodide (KNORR and WAENTIG), 1907, A., i, 958.
**1-Methyldeoxyxanthine** and its salts (TAFEL and HERTERICH), 1911, A., i, 506.
**Methyldiacetonalkamine.** See Methyl-β-methylamino*iso*butylcarbinol.
**Methyldiacetoneamine** and its oxime, benzoyl derivative, and salts (HOCHSTETTER and KOHN), 1904, A., i, 18.
**Methyldiallylcarbinol** (SAYTZEFF, PETROFF, MUSUROFF, CHOWANSKY, ANDRÉEFF, CHONOWSKY, and LUNIACK), 1907, A., i, 815.
**3-Methyldiallyl*cyclo*hexanone**(HALLER), 1905, A., i, 214.
**Methyldi*iso*amyl*iso*carbamide** (MCKEE), 1909, A., i, 636.
*ms*-**Methyl-1:2:1′:2′-dianthracenexanthen** (ULLMANN and ÜRMÉNYI), 1912, A., i, 716.
**2-Methyl-1:2:′-dianthraquinonylamine,** oxidation of (BADISCHE ANILIN- & SODA-FABRIK), 1908, A., i, 456.
**6-Methyl-2:3:7:0-diazpyridazine,** 4-hydroxy-. See 5-Methyl-1:2:4:9-benzotetrazole, 7-hydroxy-.
**5-Methyl-1:2-dibenzanthraquinone,** *penta*bromo- (SCHOLL and TRITSCH), 1912, A., i, 36.
**3-Methyldibenzyl-2-carboxylic acid** (MÜLLER), 1909, A., i, 159.
**Methyldi*iso*butyl*iso*carbamide** and its hydrochloride and ferrocyanide (MCKEE), 1909, A., i, 635.
**Methyldi*iso*butylurethane.** See Di*iso*butylcarbamic acid, methyl ester.
**4-Methyl-2:3-dicarbethoxypentan-4-olid.** See αβ-Dicarbethoxy-γγ-dimethylbutyrolactone.
**α-Methyl-αα-diethylacetophenone** and its oxime (HALLER and BAUER), 1909, A., i, 109.
**Methyldiethylamine,** chloro-, and its platinichloride (HOUBEN and ARNOLD), 1908, A., i, 534.
**1-Methyl-5:5-diethylbarbituric acid** (FISCHER and DILTHEY), 1905, A., i, 37; (CONRAD and ZART), 1905, A., i, 753.
**Methyl-5:5-diethylbarbituric acids,** 1- and 3-, 4-imino- (CONRAD and ZART), 1905, A., i, 752, 755.
**Methyldiethylbetainenitrile** and its derivatives (KLAGES and MARGOLINSKY), 1904, A., i, 145.
*as*-ψ-**Methyldiethylcarbamide** (MCKEE), 1906, A., i, 732.
**Methyldiethylcarbinol** (KLING), 1904, A., i, 2.
**Methyldiethylcarbinol,**chloro- (RIEDEL), 1906, A., i, 632.
  and its reaction with secondary amines (SÜSSKIND), 1906, A., i, 133.
  synthesis of (DALEBROUX and WUYTS), 1907, A., i, 105.
**Methyldiethylcarbinylurethane** (VEREINIGTE CHININFABRIKEN ZIMMER & Co.), 1912, A., i, 542.
**10-Methyl-9-diethyldihydroacridine** (FREUND and BODE), 1909, A., i, 515.
**α-Methyl-ββ-diethylethylene-α-chlorohydrin** (FOURNEAU and TIFFENEAU), 1907, A., i, 818.

**Methyldiethyl-β-hydroxyethylammonium** salts (Emde and Runne), 1911, A., i, 718.

**Methyldiethyl-β-hydroxyethylammonium** aurichloride (Emmert), 1912, A., i, 253.

**2-Methyl-3:3-diethylindolenine,** action of magnesium phenyl bromide on (Plancher and Ravenna), 1907, A., i, 152.

**1-Methyl-1:2-diethyl*cyclo*propane** (Kijner), 1912, A., i, 247.

**Methyldiethylpropionobetaine** and its derivatives (Klages and Margolinsky), 1904, A., i, 145.

**4-Methyl-2:2-diethyl-7-*iso*propylindandione** (Freund and Fleischer), 1910, A., i, 491.

**5-Methyl-2:4-diethylpyrimidine,** 6-amino-. See Cyanethine.

**Methyldiethylsulphinium hydroxide** in dogs' urine (Neuberg and Grosser), 1905, A., ii, 739.

**Methyldiethyluracil** and *di*bromo- and *tri*bromohydroxy- (Hoebel), 1907, A., i, 558.

**Methyldiglycollic acid,** ethyl ester, anhydride, amide, and imide of (Jungfleisch and Godchot), 1907, A., i, 749.

**10-Methyldihydroacridine,** 5-cyano-, and its picrate and platinichloride (Kaufmann, Albertini, and Holsboer), 1909, A., i, 606.

**1-Methyl-9:10-dihydroanthracene** (Fischer and Ziegler), 1912, A., i, 754.

**4-Methyl-9:10-dihydroanthracene,** 1-chloro- (Fischer and Ziegler), 1912, A. i, 754.

**2-Methyl-1:3-dihydrobenzoxazine-4-one** (Hicks), 1910, T., 1032 ; P., 91.

**α-Methyldihydroberberine** and its salts (Freund and Beck), 1905, A., i, 151 ; (Merck), 1907, A., i, 435.

**2-Methyldihydrocarvene.** See 2-Methylhomolimonene.

**2-Methyldihydrocarveol** (Rupe and Emmerich), 1908, A., i, 433.

**Methyldihydrocarvone** and its oxime and semicarbazone (Rupe and Liechtenhan), 1906, A., i, 375.

**4-Methyldihydrocinnamic acid.** See β-*p*-Tolylpropionic acid.

**4-Methyldihydrocoumarin** (Peters and Simonis), 1908, A., i, 340.

**2-Methyldihydrofuranone,** 3:4-*di*bromo- and *di*chloro- (Simonis, Marben, and Mermod), 1906, A., i, 32.

**α-Methyl-αβ-dihydrogeranic acid.** See αβζ-Trimethyl-$\Delta^{\epsilon}$-octenoic acid.

**3-Methyl-2:3-dihydroindene-2-carboxylic acid,** resolution of, into its optically active isomerides (Neville), 1906, T., 383 ; P., 64.

**2-Methyldihydroindole,** formation of, and its benzoyl and benzenesulphonyl derivatives (v. Braun and Steindorff), 1905, A., i, 81, 156.
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**3-Methyldihydroindole,** benzoyl derivative (v. Braun and Kirschbaum), 1912, A., i, 499.

**4-Methyldihydroindoleanthrene,** 6-hydroxy- (Scholl and Tritsch), 1912, A., i, 36.

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**ε-Methyldihydromorphimethine methyl ether,** bromohydroxy-, and its hydriodide (Pschorr, Dickhäuser, and D'Avis), 1912, A., i, 720.

**10-Methyl-1:2-dihydronaphthacridine** (Bucherer and Seyde), 1907, A., i, 345.

**1-Methyldihydro-1′:2′-naphtha-2-quinoxalone** (Lange), 1908, A., i, 839.

**2-Methyldihydroperimidylacetic acid,** ethyl and methyl esters (Sachs), 1909, A., i, 432.

**2-Methyldihydroperimidylpropionic acid,** ethyl ester (Sachs), 1909, A., i, 433.

**3-Methyldihydrophenanthraphenazoxine,** hydroxy- (Kehrmann and Winkelmann), 1907, A., i, 346.

**3-Methyldihydropyrazoquinazolone,** 6-amino-, and its derivatives (Michaelis, Krug, Leo, and Ziesel), 1910, A., i, 514.

**Methyldihydropyridone,** hydroxy- (Maquenne and Philippe), 1904, A., i, 339.

**1-Methyl-1:2-dihydro-6-pyridone-3-carboxylic acid** and its methyl ester (Meyer), 1906, A., i, 108.

**3-Methyldihydro-2-pyrimidone,** 5:6-*di*amino-, and its formyl derivative and 5-nitro-6-amino- (Johns), 1912, A., i, 320.

**4-Methyl-1:6-dihydro-6-pyrimidone,** 2-oximino- (Johnson and Shepard), 1912, A., i, 911.

**5-Methyldihydro-6-pyrimidone,** 2-amino-, and its salts (Johnson and Clapp), 1904, A., i, 819.

**4-Methyldihydro-6-pyrimidone-5-acetic acid**, 6-amino- (Johnson and Heyl), 1908, A., i, 59.

**4-Methyl-1:6-dihydro-6-pyrimidone-2-oximinothiolpropionic acid** (Johnson and Shepard), 1912, A., i, 911.

**4-Methyl-1:6-dihydro-6-pyrimidone-2-thiolacetic acid**, and its potassium salt and ethyl ester (Johnson and Shepard), 1911, A., i, 924.

**4-Methyl-1:6-dihydro-6-pyrimidone-2-*α*-thiol-*β*-hydroxyacrylic acid**, ethyl ester (Johnson and Shepard), 1911, A., i, 925.

**4-Methyl-1:6-dihydro-6-pyrimidone-2-thioloxalacetic acid** (Johnson and Shepard), 1912, A., i, 911.
  diethyl ester, and its thiocarbamide derivative (Johnson and Shepard), 1911, A., i, 925.

**4-Methyl-1:6-dihydro-6-pyrimidone-2-thiolpyruvic acid** (Johnson and Shepard), 1912, A., i, 911.

**2-Methyldihydroquinazoline** and its picrate (Gabriel), 1903, A., i, 446.

**3-Methyldihydroquinazoline** and its salts (Gabriel and Colman), 1904, A., i, 1060.

**8-Methyldihydroquinazoline** and its additive salts (Jürgens), 1907, A., i, 1037.

**1-Methyl-1:2-dihydro-2-quinoxalone** and its **3-carboxylic acid** and its methylamide (Kühling and Kaselitz), 1906, A., i, 465.

**2-Methyldihydro-4-quinazolone** (Finger), 1907, A., i, 876.
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  and 3-amino-, methiodides (Bogert and Geiger), 1912, A., i, 511.

**2-Methyldihydro-4-quinazolone**, 5-amino-, and its additive salts (Bogert and Chambers), 1906, A., i, 389.
  bromo-, and 6-nitro- (Bogert and Geiger), 1912, A., i, 396.
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  7-nitro-, and its 3-methyl derivative (Bogert and Steiner), 1905, A., i, 946.

**2-Methyldihydro-4-quinazolone**, 5-nitro-3-amino-, and its additive salts, and diacetyl and bromo-derivatives (Bogert and Seil), 1906, A., i, 712.

**3-Methyldihydro-4-quinazolone** ethiodide (Bogert and Geiger), 1912, A., i, 511.
  amino-, and nitro- (Bogert and Geiger), 1912, A., i, 396.
  6-nitro-, methiodide (Bogert and Geiger), 1912, A., i, 511.

**8-Methyldihydro-4-quinazolone** and its additive salts (Findeklee), 1906, A., i, 21.

**7-Methyldihydro-4-quinazolones** and their 2-alkyl derivatives (Bogert and Hoffman), 1905, A., i, 891.

**13-Methyl-5:13-dihydroquindolinium**, salts of (Fichter and Rohner), 1911, A., i, 86.

**1-Methyldihydroquinoline**, 6-bromo-8-nitro-2-hydroxy-, and its methyl and ethyl ethers (Decker, Kaufmann, Pfeifer, Prohatzka, and Albertini), 1911, A., i, 1025.
  4-cyano- (Kaufmann and Albertini), 1909, A., i, 958.

**1-Methyl-1:2-dihydroquinoline**, 3-chloro-5-nitro-2-hydroxy- (Decker), 1903, A., i, 516.

**2-Methyldihydroquinoline** and its picrate (Heller and Sourlis), 1908, A., i, 914.
  hydrochloride and sulphate and *di*bromo- (Heller and Schmeja), 1911, A., i, 748.

**6-Methyldihydroquinoline** (Heller and Schmeja), 1911, A., i, 749.

**8-Methyldihydroquinoline** and its hydrochloride (Heller and Schmeja), 1911, A., i, 749.

**1-Methyl-3:4-dihydro*iso*quinoline** and salts of (Pictet and Kay), 1909, A., i, 514.

**2-Methyl-3:4-dihydro*iso*quinolinium** hydroxide, salts of (Pyman), 1909, T., 1749.
  6:7-*di*hydroxy-, phenol-betaine, and other derivatives of (Pyman), 1910, T., 276.

**Methyldihydroresorcinol** (3:5-*dihydroxymethyl*cyclo*hexadiene*) (Blaise and Maire), 1907, A., i, 419.
  condensation of, with *m*-phenylenediamine (Haas), 1906, T., 577.

*α*-**Methyldihydrosorbic acid** (*heptenoic acid*), *β*-hydroxy-, and its ethyl ester and salts, synthesis of (Jaworsky and Reformatzky), 1903, A., i, 4; (Jaworsky), 1903, A., i, 729.

**4′-Methyldihydro-4-stilbazole** and its additive salts (Düring), 1905, A., i, 233.

**4-Methyl-3:4-dihydro-1:2:4:5-tetrazine-3:6-dicarboxylamide** (Curtius, Darapsky, and Müller), 1909, A., i, 848.

**4-Methyl-2:3-dihydrothiazole,** 2-imino-, acetyl derivative of (Young and Crookes), 1905, P., 308; 1906, T., 67.

**5-Methyl-4:5-dihydrothymine-4-carboxylic acid,** 5-bromo-4-hydroxy- (Johnson), 1907, A., i, 880.

**6-Methyl-1:6-dihydro-1:2:4-triazine,** 3:5-*di*hydroxy-, and its 1-benzoyl derivative (Bailey), 1903, A., i, 130.

**Methyldihydrouracil,** *tri*hydroxy- (Behrend and Fricke), 1903, A., i, 740.

**5-Methyldihydrouracil,** 5-hydroxy- (Fourneau), 1909, A., i, 211.

**Methyldihydrouracils, α- and β-,** *tri*hydroxy-, and their reactions (Behrend, Osten, and Beer), 1906, A., i, 309; (Behrend and Beer), 1908, A., i, 840.

**Methyl-β-dimethylamino*iso*butylcarbinol** (*dimethyldiacetonalkamine*) and its additive salts (Kohn and Schlegl), 1907, A., i, 683.
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**γ-Methyl-ββ-dimethylol-α-butanol** and its triacetate and tribenzoate (van Marle and Tollens), 1903, A., i, 460.

**Methyldinaphthacridine** and its additive salts (Senier and Austin), 1906, T., 1393; P., 241.

**13-Methyl-5:7:12:14-dinaphthanthradiquinone** (W. H. and M. Mills), 1912, T., 2201.

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**1-Methyldi*cyclo*-1:2:3-$\Delta^1$-octen-3-one** (Semmler and Bartelt), 1908, A., i, 355.

**3-Methyldioxindole,** and 5-bromo- (Kohn and Ostersetzer), 1912, A., i, 51.

**2-Methyldiphenyl,** *octa*bromo- (Klages), 1907, A., i, 599.

**4-Methyldiphenyl,** 2′-amino-, benzoyl derivative (v. Braun), 1910, A., i, 189, 880.

**4-Methyldiphenylamine,** 2-amino-, hydrochloride and benzoyl derivative of, and 2′-nitro- (Borsche and Feise), 1907, A., i, 243.
  4′-nitro-3-amino- (Ullmann), 1908, A., i, 457.

***N*-Methyldiphenylamine** hydriodide mercuri-iodide (Barnett and Smiles), 1910, T., 984.
  *o*-sulphoxide (Barnett and Smiles), 1910, T., 188.
  chloro*di*nitro- (Page and Smiles), 1910, T., 1117.

**Methyl-2′:4′-diphenylaminesulphonic acids,** sodium salts and amides (Reverdin and Crépieux), 1903, A., i, 248.

***S*-Methyldiphenylamine-*o*-sulphonium** iodide mercuri-iodide (Barnett and Smiles), 1910, T., 983.

**2-Methyldiphenyl-2′-carboxylic acid,** 4:4′-*di*amino-, and its salts (Chemische Fabrik vorm. Weiler-Ter-Meer), 1904, A., i, 53.
  ω-hydroxy-, and its lactone (Kenner and Turner), 1911, T., 2113; P., 262.

**4-Methyldiphenyl-4′-carboxylic acid,** 2:2′-*di*nitro-, and its salts, and 2:2′-*di*amino-, and its hydrochloride (v. Jakubowski and v. Niementowski), 1909, A., i, 265.

**α-Methyl-α′β-diphenyl-α′β-*di*hydroxyglutaric acid.** See α′β-Diphenyl-α-methylglutaric acid, α′β-*di*hydroxy-.

***o*-Methyldiphenylmethane,** *nona*bromo- (Klages), 1907, A., i, 599.

**3-Methyldiphenylmethane,** 5:3′:5′-*tri*bromo-4:4′-*di*hydroxy-, and 4′:4′-*di*hydroxy- (Auwers and Rietz), 1907, A., i, 919.

**4-Methyldiphenylmethanecarboxylic acid,** 2-hydroxy-, lactone of (v. Liebig), 1908, A., i, 728.

**Methyldiphenylsulphone-2-carboxylic acids,** 2′- and 4′- (Ullmann and Lehner), 1905, A., i, 290.

*as*-**ψ-Methyldipropylcarbamide** (McKee), 1906, A., i, 732.

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**5-Methyl-8:8′-diquinolyl** and its salts (v. Jakubowski and v. Niementowski), 1909, A., i, 265.

**5-Methyl-8:8′-diquinolyl-5′-carboxylic acid** and its salts (v. Jakubowski and v. Niementowski), 1909, A., i, 264.

**β-Methyl-$\Delta^{\alpha\lambda}$-dodecadiene** (Harding, Walsh, and Weizmann), 1911, T., 450; P., 12.

**Methylene** bases, action of cyanogen bromide on (v. Braun and Röver), 1903, A., i, 464.

**Methylene** compounds (Henry; Descudé), 1906, A., i, 558.
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5-**Methyleneamino-4:5:4′:5′-tetrahydro-4:4′-dipyrimidyl,** 2:4:6:2′:4′:5′:6′-*hepta*hydroxy-, and its amide (Hurtley and Wootton), 1911, T., 295; P., 2.
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**Methylenebenzene-*m*-disulphonamide** (Knoevenagel and Lebach), 1904, A., i, 995.
**Methylene-*o*-benzoquinone,** *tetra*bromo- (Zincke and Klostermann), 1907, A., i, 322.
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  *tetra*chloro- (Zincke, Schneider, and Emmerich), 1903, A., i, 757.
**Methylenebisacetylacetone** (Knoevenagel), 1903, A., i, 638.
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3-**Methylenebisbenzotetronic acid.** See 3-Methylenebis-4-hydroxycoumarin.
**Methylenebis-benzyl-, -methyl-,** and **-propyl-malonic acids,** chloro-, ethyl esters (Kötz and Zörnig), 1907, A., i, 112.
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4-**Methylenebis-3:5-dimethyl*iso*oxazole** (Knoevenagel), 1903, A., i, 639; (Rabe and Elze), 1904, A., i, 749.
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3-**Methylenebis-4-hydroxycoumarin** (Anschütz), 1903, A., i, 271; (Anschütz, Anspach, Fresenius, and Claus), 1909, A., i, 663.

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**Methylenebishydroxyquinol** and its acetate (Liebermann, Lindenbaum, and Glawe), 1904, A., i, 443.
**Methylenebis-4:6-*di*hydroxy-1:2:3-trimethylbenzene** (Luther), 1907, A., i, 128.
**Methylenebis 2-imino-4-ketotetrahydrothiophen** (Benary), 1910, A., i, 581.
**Methylenebismethyldianthranilic acid** (Houben and Arnold), 1908, A., i, 533.
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**Methylenebismethylphloroglucinol** and its methyl ether, and their azo-compounds (Boehm), 1904, A., i, 404.
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*p*-**Methylenebisphenylenemethylethylallylammonium** salts, and their active forms (Fröhlich), 1911, A., i, 494.
*p*-**Methylenebisphenylenemethylpropylallylammonium** salts (Fröhlich), 1911, A., i, 494.
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**Methylenedimethylsuccinic acid** and anhydride (Bone and Henstock), 1903, T., 1388; P., 248.
  diethyl ester, magnetic rotation and refraction of (Perkin), 1903, T., 1389; P., 248.
**Methylenedinarcotine** and its salts (Freund and Fleischer), 1912, A., i, 490; (Freund), 1912, A., i, 579.
**4:5-Methylenedioxyanthranilic acid,** 3-nitro- (Herz), 1905, A., i, 779.
**Methylenedioxybenzaldehydeindogenide** (Perkin and Thomas), 1909, T., 796; P., 125.
**Methylenedioxy-ω-benzaldehydephenylhydrazone,** nitro-, and its potassium salt (Ciusa and Pestalozza), 1908, A., i, 833.
**1:2-Methylenedioxybenzene.** See Catechol, methylene ether.
**1:2-Methylenedioxybenzene-6-azo-*o*-cresol** (Mameli), 1909, A., i, 854.
**1:2-Methylenedioxybenzene-5-azo-*p*-cresol** (Mameli), 1909, A., i, 854.
**1:2-Methylenedioxybenzene-α-azonaphthalene,** 4-amino- (Mameli), 1911, A., i, 510.
**1:2-Methylenedioxybenzeneazo-α-** and **-β-naphthol** (Mameli), 1909, A., i, 854.
**1:2-Methylenedioxybenzeneazophenol** (Mameli), 1909, A., i, 854.
**1:2-Methylenedioxybenzeneazosalicylic acid** (Mameli), 1909, A., i, 855.
**1:2-Methylenedioxybenzenediazoaminobenzene** (Mameli), 1911, A., i, 510.
**Methylenedioxybenzonitrile,** 3:4-*di*-chloro- (Ewins), 1909, T., 1487; P., 210.
**Methylenedioxybenzosuberenone** and its semicarbazone (Borsche), 1911, A., i, 1019.
**Methylenedioxybenzoylacrylic acid.** See Piperonylacrylic acid.
**Methylenedioxybenzoylpropionic acid** and its bromo-derivative (Bougault), 1909, A., i, 102.
**Methylenedioxybenzyl** chloride, 3:4-*di*-chloro- (Ewins), 1909, T., 1485; P., 210.
**3:4-Methylenedioxybenzylamine** and its derivatives (Mannich and Kuphal), 1912, A., i, 218.
**3:4-Methylenedioxybenzylaminoacetal** and its hydrochloride (Mannich and Kuphal), 1912, A., i, 851.
**3:4-Methylenedioxybenzylaminoacetic acid,** ethyl ester, and derivatives of (Mannich and Kuphal), 1912, A., i, 218.

**3:4-Methylenedioxybenzyl*di*chloroacetamide** (Mannich and Kuphal), 1912, A., i, 851.

**Methylenedioxybenzyl-cyanoacetic** and **-malonic acids** (Piccinini), 1904, A., i, 504.

**6:7-Methylenedioxy-1-benzyl-3:4-dihydro*iso*quinoline** and its salts (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 1015.

**3:4-Methylenedioxybenzyldimethylamine** and its salts (Tiffeneau), 1911, A., i, 973.

**3:4-Methylenedioxybenzylethanolamine** and its hydrochloride (Mannich and Kuphal), 1912, A., i, 851.

**3:4-Methylenedioxybenzylidene-*p*-aminobenzoic acid** (Manchot and Furlong), 1910, A., i, 34.

**3:4-Methylenedioxybenzylideneanthranilic acid** (Wolf), 1910, A., i, 736.

**5-*mp*-Methylenedioxybenzylidene-3-ψ-cumyl-**, and **3-*iso*hexyl-rhodanic acids** (Kaluza), 1910, A., i, 130.

**5-Methylenedioxybenzylidene-diphenylthiohydantoin, -rhodanic acid,** and **-3-allylrhodanic acid** (Andreasch and Zipser), 1903, A., i, 856.

**5:6-Methylenedioxy-2-benzylidene-1-hydrindone,** 2′-hydroxy-, and its acetyl derivative (Perkin and Robinson), 1907, T., 1097.

**3:4-Methylenedioxybenzylidenerhodanic acid** (Bargellini), 1906, A., i, 384.

**β-Methylenedioxybenzylidene-α-rhodaninepropionic acid** (Andreasch), 1910, A., i, 695.

**6:7-Methylenedioxy-2-benzyl-1-methyl-3:4-dihydro*iso*quinoline,** 2-chloro- (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 1015.

***mp*-Methylenedioxybenzyl-5-methyl-1:2:4-triazole,** 3-hydroxy- (Rupe and Oestreicher), 1912, A., i, 220.

**3:4-Methylenedioxybenzylsemicarbazide** and its derivatives (Rupe and Oestreicher), 1912, A., i, 220.

***mp*-Methylenedioxybenzyl-1:2:4-triazole,** 3-hydroxy- (Rupe and Oestreicher), 1912, A., i, 220.

**3:4-Methylenedioxy-1-β-bromo-α-acetoxy-*n*-propylbenzene,** nitro- (Hoering), 1905, A., i, 592.

**3:4-Methylenedioxy-β-bromo-α-methoxyethylbenzene** (Mannich and Jacobsohn), 1910, A., i, 413.

**Methylenedioxy-ω-bromostyrene** and its dibromide (Hoering), 1907, A., i, 624.

**3:4-Methylenedioxycinnamic acid,** methyl ester (Posner), 1911, A., i, 53.

**3:4-Methylenedioxydihydrochalkone** and its semicarbazone (Bargellini and Bini), 1912, A., i, 118.

**6:7-Methylenedioxy-3:4-dihydro*iso*quinoline** and its picrate (Decker), 1912, A., i, 906.
  derivatives of (Decker), 1912, A., i, 1018.

**3′:4′-Methylenedioxy-3:4-dimethoxybenzophenone** (Perkin, Weizmann, and Creeth), 1906, T., 1662.

**4:5-Methylenedioxy-1-β-dimethylaminoethylbenzene,** 2-cyano-, and its salts (Rabe and McMillan), 1911, A., i, 77

**Methylenedioxydistearic acid,** ethyl ester (Tschilikin), 1912, A., i, 604.

**Methylene-3:4-dioxyformazylbenzene** and its ***p*-sulphonic acid,** potassium salt (Fichter and Fröhlich), 1903, A., i, 723.

**3:4-Methylenedioxy-2′:4′:5′:2″:4″:5″-hexamethoxytriphenylmethane** (Székí), 1911, A., i, 634.

**Methylenedioxyhomophthalic acid** (Perkin and Robinson), 1906, P., 160.

**3:4-Methylenedioxyhydratropaldehyde** and its semicarbazone (Béhal and Tiffeneau), 1908, A., i, 631.
  and its oxime and semicarbazone (Tiffeneau and Daufresne), 1907, A., i, 515.

**Methylenedioxyhydratropic acid,** preparation of (Hoering), 1908, A., i, 895.

**5:6-Methylenedioxy-1-hydrindone** and its oxime and isonitroso- and 2-benzylidene derivatives (Perkin and Robinson), 1906, P., 160; 1907, T., 1084.

**6:7-Methylenedioxy-1-hydrindone,** 7-nitro-, and 7-amino- (Perkin, Robinson, and Thomas), 1909, T., 1981.

**5:6-Methylenedioxy-1-hydrindone-2-oxalic acid** (Ruhemann), 1912, T., 1735.

**3:4-Methylenedioxy-1-α-hydroxyethylbenzene** (Klages and Eppelsheim), 1904, A., i, 46.

**4′:5′-Methylenedioxy-2:3-indenobenzopyranol(1:4)** anhydroferrichloride (Perkin and Robinson), 1908, T., 1105.

**Methylenedioxyindophenin** (Herz), 1905, A., i, 779.

**5:6-Methylenedioxyisatin** (Herz), 1905, A., i, 779.

**3:4-Methylenedioxymandelic acid** and its ethyl ester and amide (Barger and Ewins), 1909, T., 551.

**Methylenedioxymethoxyhydratropaldehyde** and its semicarbazone (Rimini and Olivari), 1907, A., i, 523.

**6:7-Methylenedioxy-1-methyl-3:4-dihydro*iso*quinoline** and its salts (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 1015.

**6:7-Methylenedioxy-2-methylquinoline,** 4-hydroxy-, and its additive salts and acetyl derivative (Herz), 1905, A., i, 779.

**Methylenedioxyphenanthrazine** (Herz), 1905, A., i, 780.

**β-*mp*-Methylenedioxyphenyl-β-3-anisylidene*cyclo*pentan-2-onylpropiophenone** (Striegler), 1912, A., i, 782.

**Methylene-3:4-dioxyphenyl-α-benzotriazine** (Fichter and Fröhlich), 1903, A., i, 723.

**β-*mp*-Methylenedioxyphenyl-β-3-benzylidene*cyclo*pentan-2-onylpropiophenone** (Striegler), 1912, A., i, 782.

**α-3:4-Methylenedioxyphenyl-αβ-*di*bromo-** and **-β-bromo-α-hydroxyethanes** (Barger and Jowett), 1905, T., 969 ; P., 205.

**α-3:4-Methylenedioxyphenylbutan-α-ol.** See Piperonylpropylcarbinol.

**δ-Methylenedioxyphenyl-$\Delta^{\alpha}$-buten-δ-ol** and its oxidation (Korjukin), 1911, A., i, 445.

**γ-Methylenedioxyphenylbutyric acid,** β-iodo-αγ-*di*hydroxy-, lactone of (Bougault), 1908, A., i, 539.

**Methylenedioxyphenylchloroacetic acid,** 3:4-*di*chloro-, ethyl ester (Barger and Ewins), 1909, T., 558.

**Methylenedioxyphenylchloroacetyl chloride,** 3:4-*di*chloro- (Barger and Ewins), 1909, T., 556.

**Methylenedioxyphenyl*di*chloroacetyl chloride,** 3:4-*di*chloro- (Barger and Ewins), 1909, T., 558.

**Methylenedioxyphenyl-β-chloro-α-ethanol** (Pauly and Neukam), 1909, A., i, 97.

**γ-Methylenedioxyphenylcrotonic acid,** α-hydroxy- (Bougault), 1908, A., i, 270.

**Methylenedioxyphenyl*iso*crotonic acid** and its iodo-lactone (Bougault), 1908, A., i, 270.

**Methylenedioxyphenyl-α-cyanoacrylic acid,** ethyl ester, bromo-derivative (Piccinini), 1905, A., i, 599.

**6:7-Methylenedioxy-1-phenyl-3:4-dihydro*iso*quinoline** and its methiodide (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 1015.

**3:4-Methylenedioxyphenyldi-2-methylindyl-, -indolidene-,** and **-1-ethylindyl-methanes** (Freund and Lebach), 1905, A., i, 666.

**α-3:4-Methylenedioxyphenylethane,** αβ-*di*chloro-, αβωω-*tetra*chloro-, and β-chloro-α-hydroxy-(Barger),1908, T., 2083 ; P., 237.

αβ-*di*chloro-, β-chloro-α-hydroxy-, *di*chloro-α-hydroxy-, chloro-β-bromo-α-hydroxy-, and its acetate, and *tetra*bromo- (Böttcher), 1909, A., i, 153.

**β-3:4-Methylenedioxyphenylethyldimethylamine,** β-hydroxy-, and its benzoyl derivative and their additive salts (Pyman), 1908, T., 1806 ; P., 208.

**3:4-Methylenedioxyphenylglyoxylic acid** and its methylamide (Barger and Ewins), 1909, T., 555.

**3:4-Methylenedioxyphenylglyoxylonitrile** (Ewins), 1909, T., 1487 ; P., 210.

**3:4-Methylenedioxyphenylhydroxyacetimino-ethyl ether,** hydrochloride (Barger and Ewins), 1909, T., 554.

**β-3:4-Methylenedioxyphenyl-β-hydroxyethylmethylamine** and its salts (Barger and Jowett), 1905, T., 970 ; P., 205.

**5:6-Methylenedioxy-1-phenyl-4:5-indenopyrazole-3-carboxylic acid** (Ruhemann and Levy), 1912, T., 2545.

**β-*mp*-Methylenedioxyphenyl-β-4-methyl*cyclo*hexan-2-onylpropiophenones** and their derivatives(Striegler), 1912, A., i, 783.

**3:4-Methylenedioxyphenyl-β-1-naphthylpropionic acid** (Fosse), 1906, A., i, 976.

**β-3:4-Methylenedioxyphenyl-β-1-naphthyl-** and **-β-*p*-tolyl-propionic acids** and their salts (Fosse), 1907, A., i, 136.

**β-*mp*-Methylenedioxyphenyl-β-2-*cyclo*pentanonylpropiophenone** and its derivatives (Striegler), 1912, A., i, 781.

**δ-3:4-Methylenedioxyphenyl-$\Delta^{\gamma}$-pentenoic acid,** β-amino-. See α-Hydropiperic acid, β-amino-.

**β-*mp*-Methylenedioxyphenyl-β-3-piperonylidene*cyclo*pentan-2-onylpropiophenone** (Striegler), 1912, A., i 782.

α-**3:4-Methylenedioxyphenylpropane.** See Dihydro*iso*safrole.

**3:4-Methylenedioxyphenyl*cyclo*propanol** and its acetate (Tiffeneau and Daufresne), 1907, A., i, 515.

**Methylenedioxy-β-phenylpropionyl chloride,** αβ-*di*chloro-3:4-*di*chloro- (Clarke), 1910, T., 896; P., 96.

α-**3:4-Methylenedioxyphenylpropyl alcohol.** See Ethylpiperonylcarbinol.

**3:4-Methylenedioxyphenyl*iso*propylamine** (Mannich and Jacobsohn), 1910, A., i, 168.

**Methylenedioxyphenylpyruvic acid** and its oxime (Kropp, Decker, and Zoellner), 1909, A., i, 389.

δ-**3:4-Methylenedioxyphenylvaleric acid,** β-iodo-γ-hydroxy-, lactone of (Bougault), 1908, A., i, 537.

**Methylenedioxyphthalidecarboxylic acid** (Ruhemann), 1912, T., 783.

**Methylene-3:4-dioxy-1-propylbenzene.** See Dihydrosafrole.

**3:4-Methylenedioxystyrene,** chlorohydrin and tribromide of, and chlorohydrin dibromide and bromohydrin of its cyclic carbonate (Pauly and Neukam), 1909, A., i, 96.

**3:4-Methylenedioxystyrene,** β-chloro-, and its dibromide (Pauly and Neukam), 1909, A., i, 97.

**Methylenedioxystyryl cinnamylidenemethyl ketone** (*piperonylidenecinnamylideneacetone*) and its hydrochloride and bromides (Francesconi and Cusmano), 1908, A., i, 802.

**2-Methylenedioxystyryl-4-dihydroquinazolone** (Bogert and Beal), 1912, A., i, 395.

**3:4-Methylenedioxystyryldihydrouracil** (Posner and Rohde), 1910, A., i, 848.

**2-Methylenedioxystyryl-8-methylquinoline** and its additive salts (Hoffmann), 1906, A., i, 40.

**Methylenedioxytetrahydro*iso*quinoline** and its nitrobenzoyl derivative (Pictet and Gams), 1911, A., i, 483.

**Methylenedioxy-4′:4″-tetramethyl*di*aminotriphenylmethane** and 2′:2″-*di*hydroxy-(Liebermann), 1903. A., i, 860.

**3:4-Methylenedioxytoluene,** ω-bromo*di*nitro- and ω-chloro*di*nitro- (Ponzio and Charrier), 1908, A., i, 522.

**3′:4′-Methylenedioxy-2:4:6-trimethoxybenzophenone** (*oxyleucotin*), synthesis of (Perkin and Robinson), 1906, P., 306.

**3:4-Methylenedioxy-2′:4′:5′-trimethoxychalkone.** See 2:4:5-Trimethoxyphenyl 3:4-methylenedioxystyryl ketone.

**Methylenedi-*o*-phenetidine** and its platinichloride (Dains and Brown), 1909, A., i, 781.

**Methylenediphenylcarbamide** (Senier and Shepheard), 1909, T., 504.

**Methylenediphenylglycinetetracarboxylic acid** and its esters (Heller and Michel), 1903, A., i, 834.

**Methylenedipyrroles,** 1:1- and 2:2- (Pictet and Rilliet), 1907, A., i, 445.

**Methylenediresorcinol,** reduction of (Luther), 1907, A., i, 128.

**Methylenedi-salicylamide** and its benzoyl derivatives and -*iso*valeramide (Einhorn, Schupp, and Spröngerts), 1906, A., i, 248.

**Methylenedisalicylic acid.** See Methanedisalicylic acid.

**Methylene-dithiolacetic acid** and its ethyl ester and salts and **-di-α-thiolpropionic acid** (Holmberg and Mattisson), 1907, A., i, 475.

**Methylenediurethane** (Conrad and Hock), 1903, A., i, 607.

**Methylenedixylorcinol** (Luther), 1907, A., i, 128.

**Methylenedi-*p*-xylylamine** (Auwers), 1907, A., i, 917.

**Methylenefluorene,** amino-, and cyano- (Wislicenus and Russ), 1910, A., i, 840.

**Methyleneglutaconamic acid,** γ-bromo-α-amino-, methyl ester, di-2:5-dimethyl- and -diphenyl-triazolyl derivatives (Bülow and Weber), 1909, A., i, 613.

**Methylene-green** (*nitromethylene-blue*) and its additive salts (Gnehm and Walder), 1906, A., i, 390; (Grandmougin and Walder), 1906, A., i, 772.
  preparation of (Gnehm and Walder), 1908, A., i, 63.

**Methylene group,** new synthesis effected by molecules containing a, attached to two negative radicles (Haller and March), 1903, A., i, 318, 714.
  syntheses effected by the aid of compounds containing the, attached to one or two acid radicles (Haller and Blanc), 1904, A., i, 180.
  suggested name for the, in acyclic molecules (Wallach), 1906, A., i, 195.
  mobility of the hydrogen atoms of (Tröger and Lux), 1910, A., i, 161.
  splitting-off of hydrogen ions from the (Wagner and Hildebrandt), 1904, A., i, 140; (Ehrenfeld), 1904, A., i, 220.

**Methylene group**, behaviour of chloroform towards the (Kötz and Zörnig), 1907, A., i, 111.
  estimation of loosely combined (Votoček and Veselý), 1907, A., i, 243.
**Methylene*cyclo*heptane** (Wallach and Köhler), 1906, A., i, 818.
**5-Methylenehexahydropyrimidide-4:6-dicarboxylamide** and its additive metallic salts, and the action of bromine and of nitrous acid on it (Ulpiani and Pannain), 1903, A., i, 863.
**Methylene*cyclo*hexane** and its dibromide, chloronitrosite, and piperidide (Faworsky and Borgmann), 1908, A., i, 15.
  and its oxidation and nitrosochloride and nitrolamine with piperidine (Wallach and Isaac), 1906, A., i, 564.
γ-**Methylenehexan-δ-one** (Blaise and Maire), 1909, A., i, 85.
**Methylenehippuric acid**, preparation of (Chemische Fabrik auf Aktien vorm. E. Schering), 1904, A., i, 413; 1906, A., i, 499.
**Methylenehippuric acid**, hydroxy-, ethyl sodium salt (Erlenmeyer), 1903, A., i, 29.
  *m*-nitro- (Chemische Fabrik auf Aktien vorm. E. Schering), 1904, A., i, 889.
**Methylenehomophthalic acid**, hydroxy-, esters, and their isocoumarin and isocarbostyril derivatives (Dieckmann and Meiser), 1908, A., i, 894.
α-**Methylenehydantoic acid**, *di*bromo-, and its methyl ester (Gabriel), 1906, A., i, 635.
α-**Methylenehydantoin**, bromo-, and the action of bromine on (Gabriel), 1906, A., i, 634.
**Methylenehydrazine**, polymeric, and its reactions (Stollé), 1907, A., i, 496.
**Methylene-1-hydrindone**, 2-hydroxy-, and its derivatives (Ruhemann and Levy), 1912, T., 2546; P., 316.
**1-Methylene-2-hydrindone**, 3:3-*di*chloro-5-bromo- (Fries and Hempelmann), 1909, A., i, 810.
**Methylene hydrocarbons** of various ring systems, the simplest, and their conversion into alicyclic aldehydes (Wallach, Beschke, Evans, and Isaac), 1906, A., i, 563; (Wallach and Köhler), 1906, A., i, 818.
**Methyleneiminosulphonic acid**, ammonium and sodium salts (Chemische Fabrik von Heyden), 1909, A., i, 704.
**Methyleneindandione**, amino- (Errera), 1903, A., i, 266.
  amino-, and hydroxy- and its metallic derivatives (Errera), 1903, A., i, 854.
**Methyleneindigotin** and its **sulphonic acid**, and leuco-derivative and its acyl compounds (Heller and Michel), 1903, A., i, 835.
**Methyleneisatin** (Heller and Michel), 1903, A., i, 835.
**Methylenementhone**, hydroxy-(Semmler and McKenzie), 1906, A., i, 374.
  preparation of (Brühl), 1904, A. i, 601.
**Methylene-5:6-methylenedioxy-1-hydrindone**, 2-hydroxy-, and its anilide (Ruhemann and Levy), 1912, T., 2549.
**Methylene-3-methylene-3-methyl*cyclo*pentan-1-one**, 5-hydroxy-, and its derivatives (Ruhemann and Levy), 1912, T., 2551.
**Methylenemethyl ethyl ketone** (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 652.
**4-Methylene-1-methyl*cyclo*hexane**, preparation of (Perkin and Pope), 1911, T., 1514.
**Methylenemethylol-2-picoline** and its additive salts and acyl derivatives (Lipp and Richard), 1904, A., i, 343.
**Methylene-mono-** and **di-β-naphthylamines** (Möhlau and Haase), 1903, A., i, 127.
δ-**Methyleneoctane** (Clarke and Riegel), 1912, A., i, 405.
**Methyleneoxyuvitic acid** (Chemische Fabrik auf Aktien vorm. E. Schering), 1905, A., i, 703.
**Methylene*cyclo*pentane** and its oxidation and nitrosochloride, and nitrolamine with piperidine (Wallach), 1906, A., i, 563.
**Methylenephenylhydrazonecarboxylic acid**, ω-*mono*- and ω*p*-*di*bromo- and ω-bromo-*p*-chloro-, menthyl esters (Lapworth), 1903, T., 1126; P., 150.
**Methylenephenyl-α-naphthylcarbamide** (Senier and Shepheard), 1909, T., 504.
**Methylenephthalide**, amino-, and its isomeride (Gabriel), 1907, A., i, 1042.

**Methylenephthalide**, *mono-* and *di*-bromo-, hydroxy-, and its azine and oxime and its acetyl and phenylhydrazone derivatives and dibromide (Gabriel), 1907, A., i, 215, 1042.
  nitro- (Gabriel), 1903, A., i, 345.

**Methylenepyrotartaric acid**, β-hydroxy-, ethyl ester (Fichter and Rudin), 1904, A., i, 472.

**Methylenesuberene** and its oxidation, nitrosochloride, and oxime (Wallach), 1906, A., i, 371.

**Methylenetanninacetamide** (Voswinkel), 1906, A., i, 527.

**Methylenetannincarbamide** (Voswinkel), 1905, A., i, 805.

**Methylene-*ar*-tetrahydro-β-naphthylamine** (Smith), 1904, T., 733; P., 111.

**Methylene-*p*-tolylphenylhydrazonecarboxylic acid**, bromo-, menthyl ester (Lapworth), 1903, T., 1128; P., 150.

**Methylene-di-*o*-tolyl-*o*-xylylenediamine** (Scholtz and Wolfrum), 1910, A., i, 772.

**Methylenetrihydrofuranoxime** and its compound with hydrogen chloride (Scheda), 1903, A., i, 509.

**Methyl-ψ-ephedrine** and its salts (Schmidt and Emde), 1906, A., i, 978.

**Methylethenylbenzene** *di*bromide. See *iso*Propylbenzene, αβ-*di*bromo-.

**Methylethylacetaldehyde.** See α-Methylbutaldehyde.

**αα-Methylethylacetone.** See Methyl α-methylpropyl ketone.

**Methylethylacetophenone** (Dumesnil), 1911, A., i, 719.

**Methylethylacraldehyde**, condensation of, with isobutaldehyde (Morawetz), 1905, A., i, 262.
  action of alcoholic potash on (v. Lenz), 1903, A., i, 460.
  action of Grignard reagents on (Bjelouss), 1910, A., i, 706.

**β-Methyl-β-ethylacrylic acid** and its anilide (Gardner and Haworth), 1909, T., 1962.

**β-Methyl-β-ethylacrylonitrile** (Gardner and Haworth), 1909, T., 1961.

**Methylethyl*iso*allylcarbinol.** See δ-Methyl-$\Delta^{\beta}$-hexen-δ-ol.

**1-Methyl-5-ethyl-3-allyl-$\Delta^{1}$-*cyclo*hexen-3-ol** (Matschurevitsch), 1911, A., i, 962.

***p*-Methylethylamino-benzaldehyde** and its phenylhydrazone and **-benzylidene-*p*-aminodimethylaniline** (Ullmann and Frey), 1904, A., i, 423.

***p*-Methylethylaminobenzoic acid** (Houben, Schottmüller, and Brassert), 1909, A., i, 922.

**δ-Methylethylamino-δ-methyl-$\Delta^{\alpha}$-amylene** (Kohn and Morgenstern), 1907, A., i, 682.

***N*-Methylethyl-α-amino-β-naphthol**, and its hydriodide, sulphocamphylate, and acetyl derivative (Lees and Shedden), 1903, T., 761; P., 133.

***N*-Methylethyl-*o*-aminophenol** hydrochloride (Lees and Shedden), 1903, T., 753; P., 132.

**4-Methylethylamino-1-phenyl-2:3-dimethyl-5-pyrazolone** (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 196.

**4-Methylethylaminophenylimino-3-phenyl*iso*oxazolone** (Meyer), 1911, A., i, 687.

**Methylethylammonium** chlorides, preparation of (Mackenzie), 1912, A., i, 9.

**Methylethyl*iso*amylcarbinol** (Konowaloff), 1904, A., i, 496.

**Methylethyl*tert.*-amylcarbinol**, synthesis of (Konowaloff, Miller, and Timtschenko), 1907, A., i, 170.

***N*-Methylethylaniline**, *p*-bromo-, and its methiodide and picrate (Hill), 1907, A., i, 692.
  ω-cyano- (Badische Anilin- & Soda-Fabrik), 1905, A., i, 340.
  *p*-nitroso-, and its hydrochloride (Cain), 1911, A., i, 437.

**Methylethylanilinesulphonic acid** and its salts (Jones and Millington), 1904, A., i, 867.

**Methylethylanthranilic acid**, methyl ester (Houben and Ettinger), 1909, A., i, 794.

**Methylethylaziethane** (Diels and vom Dorp), 1903, A., i, 862.

**5:5-Methylethylbarbituric acid** (Gebrüder von Niessen), 1903, A., i, 799.

**1-Methyl-3-ethylbenzene** (*m-ethyltoluene*), preparation and nitration of (Bartow and Sellards), 1905, A., i, 424.

**1-Methyl-3-ethylbenzene**, 6-amino-, and its sulphate, and 6-iodo-, -iodoso-, -iodoxy-, and -iodinium compounds of (Willgerodt and Brandt), 1904, A., i, 657.
  ββ-*di*chloro- (Auwers and Hessenland), 1907, A., i, 400.
  6-iodo-, 6-iodoso-, and 6-iodoxy- (Willgerodt and Jahn), 1912, A., i, 21.

**1-Methyl-4-ethylbenzene** (*p-ethyltoluene*), and ω-*di*chloro- and nitro-derivatives (Auwers and Keil), 1903, A., i, 621.
  β-*tri*chloro- (Zincke and Schwabe), 1908, A., i, 337.
  3:5-*di*chloro-4-ββ-*di*chloro- (Auwers), 1911, A., i, 384.
**2-Methyl-1-ethylbenziminazole,** 4:7-*di*nitro-6-hydroxy-, synthesis of (Meldola), 1906, T., 1941.
**3-Methyl-2-ethylbenzopyranol** (Decker and v. Fellenberg), 1909, A., i, 117.
**3-Methyl-2-ethylbenzopyronium** ferrichloride (Decker and v. Fellenberg), 1909, A., i, 117.
**6-Methyl-5-ethyl-1:3:7:9-benzotetrazole,** 4-hydroxy-, and its salts (Bülow and Haas), 1910, A., i, 80.
**Methylethyl-$\Delta^{\beta}$-butenoic acids,** αβ- and βα-, γ-cyano- (Guareschi), 1907, A., i, 1003.
**α-Methyl-α-ethyl-*n*-butyramide** (Haller and Bauer), 1909, A., i, 131.
**α-Methyl-γ-ethylbutyrolactone,** hydrazine compound of (Blaise and Luttringer), 1905, A., i, 330.
**β-Methyl-α-ethylbutyl alcohol** and its esters (Fourneau and Tiffeneau), 1907, A., i, 818.
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**β-Methyl-α-ethylbutyric acid,** α-hydroxy-, and its ethyl ester (Darzens), 1911, A., i, 260.
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*d*-**Methylethylcarbinol,** hydrogen phthalate, and its brucine and strychnine salts (Pickard and Kenyon), 1911, T., 60.
**β-Methyl-β-ethylcholine** chloride and platinichloride (Menge), 1912, A., i, 74.
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**Methylethylcreatinine** platinichloride (Henzerling), 1911, A., i, 22.
**β-Methyl-α-ethylcrotonic acid,** γ-cyano-, ethyl ester (Bland and Thorpe), 1912, T., 889.
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**α-Methyl-α′-ethyldiglycollic acid** and its ethyl ester, anhydride, and diamide (Jungfleisch and Godchot), 1908, A., i, 127.
**10-Methyl-9-ethyldihydroacridine** (Freund and Bode), 1909, A., i, 515.
**2-Methyl-3-ethyldihydroindole** and its derivatives (König and Becker), 1912, A., i, 496.
**3-Methyl-6-ethyldihydropyrazoquinazolone** (Michaelis, Krug, Leo, and Ziesel), 1910, A., i, 514.
**2-Methyl-3-ethyl-4-dihydroquinazolone** ethiodide and methiodide (Bogert and Geiger), 1912, A., i, 511.
  6-amino- (Bogert and Geiger), 1912, A., i, 396.
**1-Methyl-2-ethyldihydroquinoline** and its platinichloride (Freund and Richard), 1909, A., i, 417.
**2-Methyl-1-ethyl-1:2-dihydro*iso*quinoline** and its tetrahydro-derivative and its methiodide (Freund and Bode), 1909, A., i, 516.
**4′-Methyl-5-ethyldihydro-2-stilbazole** and its additive salts (Langer), 1906, A., i, 38.
**4-Methyl-1- and -3-ethyldihydrouracils,** 5:5-*di*bromo-4-hydroxy- (Bückendorff), 1912, A., i, 54.
**Methyl ethyl diketone** (*acetylpropionyl*) mono-acetylhydrazone and its methyl ether, and -semicarbazone, and their sodium derivatives (Diels and vom Dorp), 1903, A., i, 862.
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*as*-**Methylethylethylene.** See β-Methyl-$\Delta^{\alpha}$-butylene.
**Methylethylfulvene** (Thiele and Balhorn), 1906, A., i, 639.

**Methylethylfumaric acid** and its salts (FICHTER and RUDIN), 1904, A., i, 473.
β-**Methyl-α-ethylglutaconic acid** and its derivatives (BLAND and THORPE), 1912, T., 1569.
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α-**Methyl-γ-ethylglutaconic acid**, preparation of, and its ethyl ester (THOLE and THORPE), 1911, T., 2205.
β-**Methyl-γ-ethylglutaconic acid**, α-cyano-, ethyl ester (BLAND and THORPE), 1912, T., 888.
α-**Methyl-γ-ethylglutaric acid**, αγ-*di*hydroxy-, derivatives of (FITTIG and V. PANAYEFF), 1907, A., i, 473.
ββ-**Methylethylglutaric acid**, and its anhydride and α-naphthylamine derivative (THOLE and THORPE), 1911, T., 440.
ββ-**Methylethylglutarimide** and its silver salt (THOLE and THORPE), 1911, T., 439.
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**Methylethylglyoxime**, cobalt derivatives of (TSCHUGAEFF), 1907, A., i, 905.
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β-**Methyl-γ-ethyl-$\Delta^{\alpha\epsilon}$-hexadiene.** See Ethylallyl*iso*propenylmethane.
**1-Methyl-3-ethyl*cyclo*hexane** (MAILHE and MURAT), 1911, A., i, 126.
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**2-Methyl-3-ethylhydantoin** (GABRIEL), 1906, A., i, 636.
*d*-**4-Methyl-4-ethylhydantoin** (DAKIN), 1910, A., i, 591.
αα-**Methylethylhydracrylic acid** and its potassium and alkaloidal salts, and ethyl ester, and its acetyl derivative (BLAISE and MARCILLY), 1904, A., i, 367.
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**1-Methyl-3-ethylidene*cyclo*hexane** and its nitrosochloride and nitrolpiperidide (WALLACH and EVANS), 1908, A., i, 404.
*l*-**1-Methyl-3-ethylidene*cyclo*hexane** and its derivatives (HAWORTH, PERKIN, and WALLACH), 1911, T., 127.
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  nitrosochloride (WALLACH and RENTSCHLER), 1909, A., i, 384.
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γ-**Methyl-α-ethylitaconic acid** and its anhydride (FICHTER and OBLADEN), 1910, A., i, 87.
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**Methyl ethyl ketone ammonia** (Thomae), 1905, A., i, 509.

**Methylethylketonesulphoxylic acid**, sodium salt (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 455.

**Methylethylketoxime**, heat of combustion of (Zuboff), 1904, A., ii, 160.

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**Methylethylmaleic acid**, methyl ester, anhydride and imide of (Küster, Galler, Haas, and Mezger), 1906, A., i, 337.

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**Methylethylmalonylethylmalonamide** (Remfry), 1911, T., 618.

**Methylethylmalonylmalonamide** (Remfry), 1911, T., 616.

**2-Methyl-3-ethyl-4-methylene-1:4-benzopyran**, 7-hydroxy-, hydrochloride and picrate of (Bülow and Deiglmayr), 1905, A., i, 149.

**2-Methyl-10-ethyl-1:2-naphthacridinium** *p*-toluenesulphonate, 3-amino-, acetyl derivative (Ullmann and Wenner), 1903, A., i, 407.

**Methylethylnonylcarbinol** (Saytzeff and Unanoff), 1911, A., i, 415.

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**2-Methyl-6-ethylolpiperidine**, and its derivatives (Löffler and Remmler), 1910, A., i, 633.

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**3-Methyl-1-ethylosotriazole**, 4-bromo- and 4-chloro- (Tamburello and Milazzo), 1907, A., i, 1088.

**3-Methyl-1-ethylosotriazole-4-carboxylic acid** and its calcium salt and its cyanide (Peratoner and Azzarello), 1907, A., i, 980.

**Methylethyloxalacetic acid**, ethyl ester (Mebus), 1905, A., i, 507.

**γ-Methyl-α-ethylparaconic acid** (Fichter and Obladen), 1910, A., i, 87.

**β-Methyl-γ-ethylpentane** and β-iodo- (Clarke), 1908, A., i, 493.

**γ-Methyl-γ-ethylpentane** (Tafel and Jürgens), 1909, A., i, 545.

**β-Methyl-γ-ethylpentane-βγ-diol** (Parry), 1911, T., 1171; P., 141.

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**β-Methyl-α-ethyl-$\Delta^{\alpha}$-pentenoic acid**, its ethyl ester, bromide, and metallic salts (Matschurevitsch), 1910, A., i, 815,

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**2-Methyl-4-ethylphenyl iododichloride** (Willgerodt and Jahn), 1912, A., i, 21.

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**δ-Methyl-α-ethylpimelic acid** and its ethyl ester and silver salt (Kötz), 1908, A., i, 24.

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**1-Methyl-3-ethylpiperidine** and its additive salts (Lipp and Widnmann), 1905, A., i, 610, 662.

**2-Methyl-6-ethylpiperidines**, and their separation and resolution, and salts (Löffler and Thiel), 1909, A., i, 183.

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**β-Methyl-α-ethyl-$\Delta^{\alpha}$-propenylbenzene** and its dibromide (Klages and Haen), 1904, A., i, 497.

- *α*-**Methyl-*α*-ethyl-*α*-propylacetophenone** and its oxime (Haller and Bauer), 1909, A., i, 109.
- **1-Methyl-2-ethyl-4-*iso*propylbenzene** (Klages and Sommer), 1906, A., i, 567.
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- **Methylethylpropyl*iso*butylammonium hydroxide**, attempted resolution of (Wedekind), 1912, A., i, 948.
  - salts of (Pope and Read), 1912, T., 523.
- **Methylethylpropyl-*β*-hydroxyethylammonium** auri- and platini-chlorides (Emmert), 1912, A., i, 253.
- *d*-**Methylethylpropylmethane.** See *β*-Ethylpentane.
- **4-Methyl-3-ethyl-1-propyluracil** (Bückendorff), 1912, A., i, 55.
- **3-Methyl-1-ethylpyrazole,** 5-chloro-, ethiodide (Michaelis and Lachwitz), 1910, A., i, 641.
- **5-Methyl-2-ethyl-3-pyrazolidone,** 1-nitroso- (Muckermann), 1911, A., i, 815.
- **3-Methyl-4-ethylpyrazolone** (Locquin), 1904, A., i, 552.
- **2-Methyl-3-ethylpyridine** and its salts (Koenigs, Bernhart, and Ibele), 1906, A., i, 762.
- **4-Methyl-3-ethylpyridine,** reduction of, with sodium and alcohol (Koenigs and Bernhart), 1905, A., i, 824.
- **2-Methyl-5-ethylpyridine,** condensation of, with aldehydes (Langer), 1906, A., i, 38.
- **4-Methyl-5-ethylpyridine,** 2:6-*di*hydroxy-, and its hydrochloride and benzoyl and isonitroso-derivatives (Rogerson and Thorpe), 1905, T., 1709; P., 239.
- **2-Methyl-6-ethylpyridine,** aurichloride, picrate, and platinichloride of (Löffler and Thiel), 1909, A., i, 183.
- **4-Methyl-3-ethylpyridine-5-carboxylic acid,** 2:6-*di*hydroxy-, ethyl ester, and its hydrochloride (Rogerson and Thorpe), 1905, T., 1713.
- **2-Methyl-5-ethylpyridine-3-carboxylic acid,** 6-hydroxy-, and its ethyl ester (Errera and Labate), 1904, A., i, 190.
- **4-Methyl-5-ethylpyrimidine,** amino-, 2-amino-6-hydroxy-, aminothio-, chloro-, chloroamino-, 2:6-*di*hydroxy-, and thio-derivatives of, and their salts (Byk), 1903, A., i, 657.
  - 2-cyanoamino-6-hydroxy- (Pohl), 1908, A., i, 577.
- **4-Methyl-3-ethyl-*α*-pyrone,** 6-hydroxy- (Bland and Thorpe), 1912, T., 1569
- **2-Methyl-3-ethylpyrrole-4:5-dicarboxylic acid,** 4-ethyl hydrogen ester (Piloty and Wilke), 1912, A., i, 900.
- **1-Methyl-2-ethylpyrrolidine** and its derivatives (Löffler and Bobiloff), 1910, A., i, 633.
- **Methylethylpyruvic acid** and its salts and phenylhydrazone (Mebus), 1905, A., i, 508.
  - and its ethyl ester and semicarbazone (Bouveault and Locquin), 1905, A., i, 636.
  - and its derivatives, preparation of (Locquin), 1906, A., i, 928.
- **2-Methyl-3-ethyl-4-quinazolone,** 6- and 7-amino-, acetyl derivatives (Bogert, Amend, and Chambers), 1910, A., i, 895.
- **2-Methyl-1-ethylquinolylene-4(2′)-quinaldine** salts (Kaufmann and Vonderwahl), 1912, A., i, 503.
- **4′-Methyl-5-ethyl-2-stilbazole** and its additive salts and **-2-stilbazoline** (Langer), 1906, A., i, 38.
- *α*-**Methyl-*α*-ethylsuccinic acid,** preparation of (Higson and Thorpe), 1906, T., 1467; P., 242.
  - synthesis and resolution of (Inglis), 1911, T., 544; P., 46.
- **2-Methyl-5-ethyltetrahydropyridine** and its additive salts (Koenigs and Bernhart), 1906, A., i, 36.
- **2-Methyl-5-ethyltetrahydropyridine,** *di*hydroxy-, and its additive salts (Koenigs, Bernhart, and Ibele), 1907, A., i, 792.
- **2-Methyl-1-ethyltetrahydroquinoline** (Scholtz and Pawlicki), 1905, A., i, 473.
- **Methylethylthetine,** menthyl ester, nitrate of (Smiles), 1907, P., 291.
  - *l*-menthyl ester, salts of, molecular rotations of (Smiles), 1905, T., 453; P., 93.
- *ψ*-**Methylethylthiocarbamide** hydriodide (Johnson and Heyl), 1907, A., i, 728.
- **Methylethyl-*p*-toluidine** and its picrate (Wedekind and Oberheide), 1904, A., i, 732.
- **5-Methyl-1-ethyl-1:2:3-triazole** and its **4-carboxylic acid** (Wolff and Krüche), 1912, A., i, 1030.
- **4-Methyl-2-ethyl-1:2:3-triazole-5-carboxylic acid** (Oliveri-Mandalà), 1910, A., i, 441.
- *α*-**4 Methyl-4-ethyltrimethylenedicarbonimide** (Ghiglieno), 1910, A., i, 506.
- *α*-**4-Methyl-4-ethyltrimethylenedicarbonimide,** 3:5-*di*cyano-, *α*- and *β*-amides of, and their salts (Ghiglieno), 1910, A., i, 505.

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**α-Methyl-α-ethyl-*n*-valeric acid** and its amide (Haller and Bauer), 1909, A., i, 131.
**β-Methyl-α-ethylvaleric acid,** β-hydroxy-, and its ethyl ester and metallic salts (Matschurevitsch), 1910, A., i, 815.
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**6-Methylflavanone** and its oxime (Auwers and Müller), 1909, A., i, 46.
**3-Methylflavone,** 1-hydroxy-, synthesis of, and its sodium salt and acetyl derivative (Ludwinowsky and Tambor), 1907, A., i, 75.
**5-Methylflavone,** 7-hydroxy-, and its acetyl derivative, 7:3′-*di*hydroxy-, and 7:3′:4′-*tri*hydroxy-, and its triacetyl derivative (Tambor), 1908, A., i, 350.
**7-Methylflavone,** 5:2′-, 5:3′-, and 5:4′-*di*hydroxy-, and their diacetates and 5:3′:4′-*tri*hydroxy- and its triacetate (Tambor), 1908, A., i, 358.
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**9-Methylfluorene alcohol** (Ullmann and v. Wurstemberger), 1906, A., i, 76.
  and its reactions (Daufresne), 1908, A., i, 164.
**9-Methylfluorone,** 3-hydroxy-, and its derivatives (Kehrmann and Jones), 1910, A., i, 408.
**9-Methylfluorone,** 5(or 7)-, 8-hydroxy-, and its **carboxylic acid** (Schreier and Wenzel), 1904, A., i, 517.
  2:3:7-*tri*hydroxy-, and its acetyl derivative (Liebermann, Lindenbaum, and Glawe), 1904, A., i, 443; (Liebermann and Lindenbaum), 1904, A., i, 764.
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**2-Methylfuran,** formation of, from furfurylidenehydrazine (Kijner), 1912, A., i, 204.
**2-Methylfuran-3-carboxylic acid,** ethyl ester (Plancher and Albini), 1904, A., i, 334; (Benary), 1911, A., i, 320.
**4-Methylfuran-2:3-dicarboxylic acid,** 5-bromo- (Trefilieff and Mangubi), 1909, A., i, 821.
**Methylfurfuraldehyde,** and ω-hydroxy-, β-naphthylamine derivatives of (Cooper and Nuttall), 1912, T., 1080; P., 139.
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**2-Methylfurfurylidene** diacetate (Blanksma), 1909, A., i, 780.
**α-Methylgalactoside** (Irvine and Cameron), 1904, T., 1071; P., 174.

β-**Methylgalactoside,** alkylation of (Irvine and Cameron), 1905, T., 902; P., 191.

**Methylgalactosides,** transformations of (Jungius), 1905, A., i, 573.

**Methylgalipidine** and its hydrochloride and platinichloride (Beckurts and Frerichs), 1906, A., i, 35.

**Methylgelatin** (Skraup and Böttcher), 1911, A., i, 247.

α-**Methylgeranic acid** and its esters (Tiffeneau), 1908, A., i, 500.

α-**Methylgeraniol** (Farbenfabiken vorm. F. Bayer & Co.), 1904, A., i, 842; 1905, A., i, 147; (Austerweil and Cochin), 1910, A., i, 687.

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**Methylglucase** in beer yeast (Bresson), 1910, A., i, 798.

**Methylglucosamine** hydrochloride (Irvine, McNicoll, and Hynd), 1911, T., 260; P., 23.

**Methylglucosazone** (Irvine and Hynd), 1909, T., 1225; P., 176.

**Methylglucoside,** amino-, hydrobromide and hydrochloride (Fischer and Zach), 1911, A., i, 117.
  α-amino-, and its hydrobromide and hydrochloride (Irvine and Hynd), 1912, T., 1137.

α-**Methylglucoside** from bioses (Foerg), 1903, A., i, 713.
  methyl ethers of (Purdie and Irvine), 1903, T., 1023; P., 192; (Purdie and Bridgett), 1903, T., 1037; P., 193.

β-**Methylglucoside,** preparation of (Maquenne), 1905, A., i, 415; (Armstrong and Courtauld), 1905, A., i, 746.
  alkylation of (Irvine and Cameron), 1905, T., 900; P., 191.

β-**Methyl-*d*-glucoside,** tetrabenzoyl derivative of (Fischer and Helferich), 1911, A., i, 803.

**Methylglucosides,** transformations of (Jungius), 1905, A., i, 573.
  stereoisomeric, and their penta-acetates and transformations (Jungius), 1904, A., i, 651.

**Methyl-*d*-glucosides,** mutual transformation of the two stereoisomeric (Jungius), 1903, A., i, 733.
  α- and β-, diastatic decomposition of (Bierry), 1909, A., ii, 747.

**Methyl-glucosides** and **-galactosides,** α- and β-, tetra-acetates, hydrolysis of (Armstrong and Arup), 1904, T., 1048; P., 169.

α-**Methylglutaconanil** (Feist and Pomme), 1910, A., i, 9.

α-**Methylglutaconic acid,** *cis-* and *trans-*, semianilides of (Thole and Thorpe), 1911, T., 2231.

β-**Methylglutaconic acid,** its silver salt, anhydride, and anilic acid, and α-cyano-, ethyl ester (Rogerson and Thorpe), 1905, T., 1687; P., 239.
  formation of (Darbishire and Thorpe), 1905, T., 1714; P., 239.
  derivatives of (Bland and Thorpe), 1912, T., 865, 1565; P., 49.

β-**Methylglutaconic acid,** α-hydroxy-, ethyl ester (Feist and Beyer), 1906, A., i, 335.

α-**Methylglutaconic acids,** *cis-* and *trans-*, and their barium and calcium salts and bromo- (Feist and Pomme), 1910, A., i, 9.

β-**Methylglutaconic acids,** *cis-* and *trans-*, and their salts and esters (Feist and Beyer), 1906, A., i, 335, 336.
  and their salts, anilide, and *p*-toluidide (Fichter and Schwab), 1906, A., i, 625.

α-**Methylglutaconic anhydride** and its semianilide (Feist and Pomme), 1910, A., i, 9.

α-**Methylglutaric acid** (*butanedicarboxylic acid*), synthesis of (Franke and Kohn), 1903, A., i, 66.

α-**Methylglutaric acid,** α-bromo-, and αβδ-*tri*bromo-, and its methyl ester (Perkin and Simonsen), 1909, T., 1174.
  β-imino-α′-cyano-, esters and salts (Baron, Remfry, and Thorpe), 1904, T., 1747.

β-**Methylglutaric acid** (*ethylidenediacetic acid*) and its anhydride and α-bromo- and α-cyano-derivatives, ethyl esters (Darbishire and Thorpe), 1905, T., 1716; P., 239.
  and its anilide and nitrile (Blaise and Gault), 1907, A., i, 281.

β-**Methylglutaric acid,** bromo-, and αβ-*di*bromo-, ethyl esters (Feist and Beyer), 1906, A., i, 335.
  αβ-*di*bromo- (Fichter and Schwab), 1906, A., i, 625.
  *tri*chloro- (Kötz), 1907, A., i, 707.

**Methylglutazine** and its **carboxylic acid,** ethyl ester, and its dibenzoyl derivative, and oxime (Baron, Remfry, and Thorpe), 1904, T., 1749; P., 243.

α-**Methylglyceraldehyde,** preparation of (Zeisel and Däniek), 1910, A., i, 92.

*d*-α-**Methylglyceric acid**, conversion of *d*-α-methylisoserine into, and potassium salt of (Kay), 1909, T., 560; P., 90.
β-**Methylglyceric acid.** See Butyric acid, αβ-*di*hydroxy-.
**Methylglycide** (Henry), 1904, A., i, 474.
*d*-α-**Methylglycidic acid**, potassium salt (Kay), 1909, T., 563; P., 90.
δ-**Methylglycocyamidine** (Korndörfer), 1905, A., i, 30.
**Methylglycol phthalate**, chloro-. See αβ-Propylene phthalate, γ-chloro-.
**Methylglyoxal**, preparation of (Meisenheimer), 1912, A., i, 831.
  fermentability of (Mayer), 1907, A., i, 183.
  aldehydeacetal of, and its semicarbazones (Wohl and Lange), 1908, A., i, 943.
  monoacetal, semicarbazone, and dipolymeride of (Harries and Türk), 1905, A., i, 413.
  disemicarbazone (Harries and Weiss), 1906, A., i, 228.
  as a general colour reagent in analysis (Denigès), 1909, A., ii, 624.
**Methylglyoxalidone** and its benzoylation and its dibenzylidene derivative (Finger), 1907, A., i, 876.
1-**Methylglyoxaline** and its salts (Jowett), 1903, T., 444; P., 54.
2-**Methylglyoxaline**, iodo-, and its aurichloride (Pauly and Gundermann), 1909, A., i, 72.
  4:5-*di*-iodo-, and 1:4:5-*tri*-iodo- (Pauly), 1910, A., i, 639.
4(5)-**Methylglyoxaline** (Knoop and Windaus), 1905, A., i, 509.
  and its salts (Windaus), 1907, A., i, 90, 288.
  and its picrolonate (Inouye), 1907, A., i, 482.
  preparation of, from dextrose, and its salts (Windaus and Knoop), 1905, A., i, 381.
  condensation of, with chloral (Gerngross), 1912, A., i, 314.
  derivatives of (Ewins), 1911, T., 2052; P., 259.
4(5)-**Methylglyoxaline**, 4-amino-, and its salts and derivatives (Windaus and Opitz), 1911, A., i, 752.
    salts of (Pyman), 1911, T., 2175.
  bromo-, and *di*bromo-, and their salts (Pyman), 1910, T., 1826; P., 212.
  bromonitro-, and nitro- (Windaus), 1909, A., i, 259.
  4(or 5)-chloro-, 4(or 5)-cyano-, 4(or 5)-hydroxy-, and their salts (Pyman), 1911, T., 673; P., 91.
1-**Methylglyoxaline-4-acetic acid** and its ethyl ester and their picrates (Pyman), 1911, T., 2180.
1-**Methylglyoxaline-5-acetic acid** and its picrate (Pyman), 1911, T., 2181.
5(4)-**Methylglyoxaline-4(5)-aldehyde**, anil of (Gerngross), 1912, A., i, 316.
5(4)-**Methylglyoxaline-4(5)-carboxylic acid** and its salts and ethyl ester (Gerngross), 1912, A., i, 316.
5(4)-**Methylglyoxaline-4(5)-chloroacetic acid**, salts and derivatives of (Gerngross), 1912, A., i, 315.
2-**Methylglyoxaline-1-diazobenzenesulphonic acid** (Burián), 1904, A., i, 354.
5(4)-**Methylglyoxaline-4(5)-glycollic acid** and its salts and derivatives (Gerngross), 1912, A., i, 315.
5(4)-**Methylglyoxaline-4(5)-glyoxylic acid** and its salts and derivatives (Gerngross), 1912, A., i, 316.
4-**Methyl-2-glyoxalone**, ω-amino-, salts and derivatives of (Franchimont and Dubsky), 1911, A., i, 238.
5-**Methyl-4-glyoxalone**, amino-, and its salts and methyl derivatives (Tafel and Mayer), 1908, A., i, 743.
**Methylglyoxalosotetrazone**, formation of (Dieckmann and Platz), 1905, A., i, 954.
α-**Methylglyoxal-α-oxime-β-phenylhydrazone** (Bülow and Hecking), 1911, A., i, 244.
**Methylglyoxime**, cobalt derivative of (Tschugaeff), 1907, A., i, 906.
*N*-**Methylgranatanine** and its derivatives and ψ-**Methylgranatanine**, 3-chloro- (Willstätter and Veraguth), 1905, A., i, 543.
*N*-**Methylgranatenine**, salts of (Willstätter and Waser), 1912, A., i, 18.
**Methylgranatoline** and ψ-**Methylgranatoline** and their additive salts (Willstätter and Veraguth), 1905, A., i, 544.
**Methyl-green**, pharmacological action of (Fühner), 1908, A., ii, 877.
**Methyl group**, substitution of the acetyl group by the, by means of diazomethane (Herzig and Tichatschek), 1906, A., i, 431.
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**Methyl group** attached to nitrogen, estimation of (Goldschmiedt and Hönigschmid), 1903, A., ii, 578.
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**Methylguanidine** (v. Gulewitsch), 1906, A., i, 637.
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  occurrence of, in the urine in parathyroidectomy (Koch), 1912, A., ii, 1194.
  salts of, crystallography of (Schwantke), 1910, A., i, 545.
**Methylguanidine,**cyanohydroxy-(Pohl), 1908, A., i, 576.
α-**Methylguanidine,** picrolonate of (Wheeler and Jamieson), 1908, A., i, 253.
  platinichloride of (Schenck), 1912, A., i, 425.
α-**Methyl-**β-**guanidineacrylic acids,** *cis-* and *trans-* (Johnson and Clapp), 1904, A., i, 819.
α-**Methylguaninobutyric acid,** lactam platinichloride (Ganssser), 1909, A., i, 703.
γ-**Methylguaninobutyric acid** and its salts with acids (Ganssser), 1909, A., i, 703.
α-**Methylguaninopropionic acid,** lactam (2-*imino*-3:4-*dimethyltetrahydro*-5-*glyoxalone*) and its salts (Ganssser), 1909, A., i, 702.
β-**Methylguaninopropionic acid** and its salts with acids and salts of its lactam (Ganssser), 1909, A., i, 703.
**Methylguloside** (Blanksma and Alberda van Ekenstein), 1908, A., i, 951.
**Methylhæmatic acid,** derivatives of (Küster), 1908, A., i, 303.
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  methohydroxide and methiodide (Hasenfratz), 1912, A., i, 578.
**Methyl***apo***harmine,** bromo- (Hasenfratz), 1912, A., i, 209.
**Methyl***apo***harmine,** iodo-, and its hydriodide (Hasenfratz), 1912, A., i, 383.
**Methylhemisparteilene** (Moureu and Valeur), 1908, A., i, 43.
**Methyl heptadecyl ketone** and its oxime (Thoms and Vogelsang), 1908, A., i, 4.
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γ-**Methyl-**$\Delta^{\beta\delta}$**-heptadiene,** and its dihydrobromide (Abelmann), 1910, A., i, 455.
δ-**Methyl-**$\Delta^{\beta\delta}$**-heptadiene** (Bjelouss), 1910, A., i, 706.
ζ-**Methyl-**$\Delta^{\beta\delta}$**-heptadiene** (Reif), 1908, A., i, 847.
β-**Methylheptane** (Buelens), 1909, A., i, 78.
  and δ-, and ζ-iodo- (Clarke), 1909, A., i, 125.
  secondary alcohols from (Henry, Buelens, and Muset), 1906, A., i, 723.
β-**Methylheptane,** γ-iodo-(Muset), 1907, A., i, 374.
γ-**Methylheptane** (Clarke), 1909, A., i, 349.
γ-**Methylheptane,** γ-bromo- (Kijner), 1912, A., i, 247.
δ-**Methyl-heptane,** -β-**heptanol,** and -β-**heptanone** (Clarke), 1907, A. i, 169.
β-**Methylheptane-**βζ**-diol** (Rupe and Schlochoff), 1905, A., i, 414.
γ-**Methylheptane-**βδ**-diol** and its diacetate (Abelmann), 1909, A., i, 547.
δ-**Methylheptane-**γε**-diol** and its diacetate (Franke, Kohn, and Zwiauer), 1907, A., i, 172.
δ-**Methylheptane-**βζ**-dione** and its disemicarbazone (v. Baeyer and Piccard), 1911, A., i, 901.
δ-**Methylheptanoic acid,** γ-hydroxy- (Morgenstern), 1912, A., i, 709.
β-**Methylheptan-**δ**-ol** (Clarke), 1909, A., i, 126.
γ-**Methylheptan-**γ**-ol** (Clarke), 1909, A., i, 350.
δ-**Methylheptan-**γ**-ol** and its salts (Bjelouss), 1912, A., i, 229.
γ-**Methylheptan-**ε**-ol,** and its acetate (Guerbet), 1910, A., i, 149.
β-**Methylheptan-**ζ**-ol** (Guerbet), 1912, A., i, 527.
β-**Methylheptan-**ε**-one** (iso*amylacetone*) and its semicarbazone (Wallach and Challenger), 1911, A., i, 472.
γ-**Methylheptan-**ε**-one** and its semicarbazone (Bodroux and Taboury), 1909, A., i, 699, 767; (Guerbet), 1910, A., i, 149.

**1-Methyl*cyclo*heptan-2-one.** See Methylsuberone.

**4-Methyl*cyclo*heptatrienecarboxylic acid** and amide (BUCHNER and FELDMANN), 1904, A., i, 57.

**δ-Methyl-$\Delta^{\gamma}$-heptene** (BJELOUSS), 1912, A., i, 230.

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**δ-Methyl-$\Delta^{\gamma}$-heptene-βζ-dione** and its disemicarbazone (V. BAEYER and PICCARD), 1911, A., i, 901.

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*sec.*-**Methylheptenol**, ozonide of (HARRIES and LANGHELD), 1906, A., i, 226.

**γ-Methyl-$\Delta^{\beta}$-hepten-δ-ol** and its chloride and acetyl derivative (ABELMANN), 1910, A., i, 455.

**ζ-Methyl-$\Delta^{\beta}$-hepten-δ-ol** and its acetate (REIF), 1908, A., i, 847.

**δ-Methyl-$\Delta^{\gamma}$-hepten-ε-ol** and its acetate and chloride (BJELOUSS), 1910, A., i, 706.

**Methylheptenone,** oxidation products of (PRILESCHAEFF), 1911, A., i, 604.
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**γ-Methyl-$\Delta^{\gamma}$-hepten-ε-one** (LAW and PERKIN), 1907, P., 308.
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**Methylheptylamine** and its salts (V. BRAUN), 1911, A., i, 612.

**Methylheptylcarbinol** (HOUBEN), 1903, A., i, 48; (THOMS and MANNICH), 1903, A., i, 673.
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*d*-**Methylheptylcarbinol** (HALLER and LASSIEUR), 1910, A., i, 808.
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**Methylheptylcyanamide** (V. BRAUN), 1911, A., i, 611.

**Methyl heptyl ketone** and its compound with sodium hydrogen sulphite (VAN GYSEGEM), 1907, A., i, 375.

**Methyl heptyl ketone** from German oil of rue (HOUBEN), 1903, A., i, 48.
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**γ-Methyl-$\Delta^{\alpha\gamma}$-hexadiene** (BJELOUSS), 1912, A., i, 229.

**β-Methyl-$\Delta^{\alpha\epsilon}$-hexadiene.** See Allyl*iso*propenylmethane.

**γ-Methyl-$\Delta^{\beta\delta}$-hexadiene** (ABELMANN), 1910, A., i, 455.

**ε-Methyl-$\Delta^{\beta\delta}$-hexadiene** (REIF), 1908, A., i, 847.

**1-Methyl-$\Delta^{1:3}$-*cyclo*hexadiene** (*dihydrotoluene*) (HARRIES), 1908, A., i, 520.

**1-Methyl-$\Delta^{2:4}$-*cyclo*hexadiene,** optically active, and its dibromide (ZELINSKY and GORSKY), 1908, A., i, 619.

**1-Methyl-$\Delta^{2:6}$-*cyclo*hexadiene** (ZELINSKY and GORSKY), 1908, A., i, 722.

**1-Methyl-$\Delta^{2:4}$-*cyclo*hexadiene-2-carboxylic acid** (PERKIN), 1911, T., 758.

**1-Methyl*cyclo*hexadien-6-ol,** *penta*chloro- (ZINCKE and PFAFFENDORF), 1912, A., i, 964.

**1-Methyl-$\Delta^{2:4}$-*cyclo*hexadien-3-ol-4-carboxylic acid,** ethyl ester (KÖTZ), 1910, A., i, 258.

**1-Methyl-$\Delta^{2:5}$-*cyclo*hexadien-3-ol-4-carboxylic acid,** bromo-, ethyl ester (KÖTZ), 1910, A., i, 258.

**1-Methyl-$\Delta^{1}$-*cyclo*hexadien-4-one,** *tetra*-, *penta*-, and *hexa*-chloro- (ZINCKE, SCHNEIDER, and EMMERICH), 1903, A., i, 756.

*p*-**Methylhexahydroacetophenone** and its semicarbazone (SEMMLER and RIMPEL), 1906, A., i, 682.

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**Methylhexahydrobenzaldehydes** (*methyl*cyclo*hexanealdehydes*). See Hexahydrotolualdehydes.

*o*-, *m*-, and *p*-**Methylhexahydrobenzylamines** (GRIGNARD and BELLET), 1912, A., i, 623.

**4-Methylhexahydrocarbazole** and its nitroso-, benzoyl, and carbamyl derivatives (BORSCHE, WITTE, and BOTHE), 1908, A., i, 367.

**9-Methylhexahydrocarbazole** and its salts (SCHMIDT and SIGWART), 1912, A., i, 616.

**3-Methylhexahydro-6-pyrimidone** 4-amino-2-thio-, 4:5-*di*amino-2-thio-, and 4-imino-5-*iso*nitroso-2-thio- (Traube and Winter), 1906, A., i, 390.
**2-Methyl*cyclo*hexamethyleneimine** and its salts, nitrosoamine, and benzenesulphonyl derivative (Gabriel), 1909, A., i, 493.
**β-Methylhexane,** nitro-derivative of (Costăchescu), 1911, A., i, 101.
**β-Methylhexane,** βε-*di*hydroxy- (Losanitsch), 1911, A., i, 804.
**1-Methyl*cyclo*hexane** and its haloid derivatives (Markownikoff), 1905, A., i, 760.
  five isomeric amino-derivatives of (Gutt), 1907, A., i, 508.
  1-, 2-, 3-, 4-, and ω-chloro-derivatives (Sabatier and Mailhe), 1905, A., i, 334.
**Methyl*cyclo*hexane,** amino-, and its salts, and its transformation into suberyl alcohol (Demjanoff), 1904, A., i, 411.
  3-amino-, 3-nitro-, 1-nitro-, and derivatives (Nametkin), 1910, A., i, 830.
  4-bromo-, action of, on ethyl sodiomalonate (Hope and Perkin), 1909, T., 1360 ; P., 207.
  1:4-*di*bromo-, and 1:2:4-*tri*bromo- (Perkin), 1911, T., 761.
  *hexa*bromo- (Bodroux and Taboury), 1912, A., i, 253.
  2-chloro- and ω-nitro- (Zelinsky and Schwedoff), 1908, A., i, 864.
  ω-iodo- (Freundler), 1906, A., i, 283.
**4-Methyl*cyclo*hexane-1-*iso*butyric acid,** 1-hydroxy-, ethyl ester (Wallach), 1906, A., i, 682.
**1-Methyl*cyclo*hexane-2-carboxylic acid** and α-bromo-, ethyl esters (Kay and Perkin), 1905, T., 1071.
  *cis*-, and its amide (Zelinsky and Schwedoff), 1908, A., i, 864.
**1-Methyl*cyclo*hexane-2-carboxylic acid,** 2-amino-, and its derivatives, and the behaviour of its ethyl ester (Skita and Levi), 1908, A., i, 885.
  *trans*-4-bromo-, 5-bromo-, *trans*-1:4- and 3:4-*di*bromo-, and 4:5-*di*bromo- (Perkin), 1911, T., 750.
**Methyl*cyclo*hexane-3-carboxylic acid** (Markownikoff and Smirnoff), 1907, A., i, 418.
  and its bromination and ethyl ester, and α-hydroxy-derivative (Perkin and Tattersall), 1905, T., 1084.
**Methyl*cyclo*hexane-3-carboxylic acid,** 3-amino- (Zelinsky and Stadnikoff), 1906, A., i, 426.
**Methyl*cyclo*hexane-3-carboxylic acid** 1-bromo-, and 1-hydroxy-, lactone of (Perkin and Tattersall), 1906, P., 268.
  *cis*-1-bromo-, preparation of (Perkin and Tattersall), 1907, T., 495.
  4-bromo-, and 3:4-*di*bromo- (Luff and Perkin), 1910, T., 2152.
  *cis*- and *trans*-5-bromo- (Meldrum and Perkin), 1909, T., 1898.
  *cis*- and *trans*-6-bromo- (Fisher and Perkin), 1908, T., 1883.
  *d*-3:4-*di*bromo- (Luff and Perkin), 1911, T., 523.
  5-oximino- (Meldrum and Perkin), 1909, T., 1900.
**1-Methyl*cyclo*hexane-4-carboxylic acid,** *cis*- and *trans*- forms of, and their *p*-toluidides (Chou and Perkin), 1911, T., 536.
**1-Methyl*cyclo*hexane-4-carboxylic acid,** 3-amino-, ethyl ester (Kötz and Hesse), 1906, A., i, 88.
  4-amino-, and its derivatives and the behaviour of its ethyl ester, and hydroxy- (Skita and Levi), 1908, A., i, 885.
  α-bromo- and α-hydroxy- (Perkin), 1906, T., 835.
  2-*mono*- and 1:2-*di*-bromo- (Perkin and Pickles), 1905, T., 646.
  δ-*mono*- and γδ-*di*-bromo-, and δ-hydroxy-, and its lactone (Perkin), 1904, T., 657 ; P., 86.
*d*-**Methyl*cyclo*hexane-4-carboxylic acid,** 3-bromo-, and 3:4-*di*bromo- (Chou and Perkin), 1911, T., 534.
**1-Methyl*cyclo*hexane-2-carboxylic acids,** *cis*- and *trans*-(A)4-bromo-, and 1:4-*di*bromo- (Baudisch, Hibbert, and Perkin), 1909, T., 1878.
  *cis*-6-bromo- (Baudisch and Perkin), 1909, T., 1889.
*o*-, *m*-, and *p*-**Methyl*cyclo*hexanecarboxylonitriles** (Grignard and Bellet), 1912, A., i, 623.
**1-Methyl*cyclo*hexane-3:3-diacetic acid,** αα′-*di*cyano-, derivatives of (Guareschi), 1911, A., i, 793.
**4-Methyl*cyclo*hexane-1:3-dicarboxylic acid,** 4-imino-6-hydroxy-, ethyl ester (Rabe and Rahm), 1904, A., i, 748.
**γ-Methylhexane-αζ-diol** (Bouveault and Blanc), 1903, A., i, 731.
**γ-Methylhexane-βδ-diol** and its diacetate (Franke, Kohn, and Zurauer), 1907, A., i, 171 ; (Abelmann), 1909, A., i, 547.
**β-Methylhexane-βζ-diol** (Franke and Kohn), 1907, A., i, 816.

**1-Methyl*cyclo*hexane-3:4-diol** and its diacetate (Stadnikoff), 1904, A., i, 665.

*αβ*-**1-Methyl*cyclo*hexane-3:3-succinimide**, *αβ-di*cyano- (Guareschi), 1911, A., i, 793.

**1-Methyl*cyclo*hexane-3-sulphonic acid** and its potassium salt and chloride (Borsche and Lange), 1907, A., i, 599.

**2- and 4-Methyl*cyclo*hexanethiol** (Sabatier and Mailhe), 1910, A., i, 457.

**β-Methylhexane-αεζ-tricarboxylic acid** and its ethyl ester (Kötz and Kayser), 1907, A., i, 60.

**β-Methylhexane-βεε-tricarboxylic acid** and its ethyl ester (Blanc), 1907, A., i, 1058.

**γ-Methylhexane-βγδ-triol** and its triacetate (Abelmann), 1910, A., i, 455.

**γ-Methylhexan-β-ol** and its salts (Bjelouss), 1912, A., i, 229.

**1-Methyl*cyclo*hexan-1-ol** and **2-one** (Wallach), 1906, A., i, 176.

**1-Methyl*cyclo*hexan-2-ol** and its phenylurethane (Wallach and Franke), 1904, A., i, 425.
  salts of (Murat), 1909, A., i, 146.

**Methyl*cyclo*hexan-3-ol** and its cyanohydrin and **3-carboxylic acid**, *cis*- and *trans*-modifications of, and their anilides (Markownikoff and Smirnoff), 1907, A., i, 418.
  benzoate of (Haller and March), 1905, A., i, 771.

**Methyl*cyclo*hexanols**, action of bromine and aluminium bromide on (Bodroux and Taboury), 1912, A., i, 253.
  condensation of formaldehyde with (Murat and Cathala), 1912, A., i, 847.

**2-Methyl*cyclo*hexan-1-ol-1-acetic acid** and its ethyl ester (Wallach and Beschke), 1906, A., i, 565.

**4-Methyl*cyclo*hexan-1-ol-1-acetic acid** (Wallach and Evans), 1906, A., i, 566.

**1-Methyl*cyclo*hexan-4-ol-4-acetic acids**, α- and β- (Marckwald and Meth), 1906, A., i, 360.

**1-Methyl*cyclo*hexan-3- and -4-ol-*n*-butyric acids**, ethyl esters (Wallach and Rentschler), 1908, A., i, 405.

**1-Methyl*cyclo*hexan-4-ol*iso*butyric acid**, ethyl ester (Wallach and Churchill) 1908, A., i, 406.

*cis*-**1-Methyl*cyclo*hexan-1-ol-3-carboxylic acid**, lactone of, and its conversion into *cis*-1-bromo-1-methylcyclohexane-3-carboxylic acid (Perkin and Tattersall), 1907, T., 495.

**1-Methyl*cyclo*hexan-2-ol-3-carboxylic acid** (Gardner, Perkin, and Watson), 1910, T., 1766.

*d*-**1-Methyl*cyclo*hexan-3-ol-4-carboxylic acid** (Chou and Perkin), 1911, T., 532.

**1-Methyl*cyclo*hexan-4-ol-3-carboxylic acid** and its ethyl ester (Gardner, Perkin, and Watson), 1910, T., 1770; P., 137.

*cis*-**1-Methyl*cyclo*hexan-6-ol-3-carboxylic acid** and its lactone (Fisher and Perkin), 1908, T., 1883.

*trans*-**1-Methyl*cyclo*hexan-6-ol-3-carboxylic acid**, synthesis of (Fisher and Perkin), 1908, T., 1882.

**1-Methyl*cyclo*hexan-2-ol-4-carboxylic acids**, *cis*- and *trans*-, and their conversion into 1-methyl-$\Delta^1$-cyclohexene-4-carboxylic acid (Meldrum and Perkin), 1908, T., 1416; P., 187.

**1-Methyl*cyclo*hexan-2-ol-6-carboxylic acids**, *cis*- and *trans*-, and the lactone of the *cis*-acid (Baudisch and Perkin), 1909, T., 1887; P., 249.

*dl*- and *d*-**1-Methyl*cyclo*hexan-3-ol-4-carboxylic acids** (Gardner, Perkin, and Watson), 1910, T., 1767.

**1-Methyl*cyclo*hexan-3-ol-5-carboxylic acids**, *cis*- and *trans*-, and the lactone of the *cis*-acid (Meldrum and Perkin), 1909, T., 1897; P., 249.

**1-Methyl*cyclo*hexan-4-ol-2-carboxylic acids**, *cis*- and *trans*-A and B (Baudisch, Hibbert, and Perkin), 1909, T., 1877; P., 249.

**1-Methyl*cyclo*hexan-3-ol-3-α-propionic acid** and its silver salt (Haworth, Perkin, and Wallach), 1911, T., 126.
  ethyl ester (Wallach and Evans), 1908, A., i, 404.

**1-Methyl*cyclo*hexan-4-ol-4-propionic acid** (Wallach and Evans), 1908, A., i, 404.

**1-Methyl*cyclo*hexan-1-ol-1-α-propionic acids** (Wallach and Rentschler), 1909, A., i, 384.

**β-Methylhexanone**, oxidation of (Markownikoff), 1903, A., i, 843.

**γ-Methylhexan-ε-one** (Kohler), 1907, A., i, 1051.

**δ-Methylhexan-β-one** (Clarke), 1908, A., i, 594.

**1-Methyl*cyclo*hexan-2-one** (Kay and Perkin), 1905, T., 1070.

**1-Methyl*cyclo*hexan-2-one** and its semicarbazone (Bouveault and Chereau), 1906, A., i, 513.
  oxidation of (Markownikoff), 1903, A., i, 836; 1905, A., i, 141.
  transformation of 1:2- into 1:3-, and their oximes and benzoyl derivatives (Wallach and Franke), 1904, A., i, 424.
  semicarbazones of (Nametkin), 1910, A., i, 830.
**1-Methyl*cyclo*hexan-2-one**, 3-bromo-, 3-chloro-, and 3-hydroxy- (Kötz and Steinhorst), 1911, A., i, 211.
  *tetra*bromo- (Murat), 1909, A., i, 146.
**1-Methyl*cyclo*hexan-3-one** and its oxime and semicarbazone (Perkin and Tattersall), 1905, T., 1088.
  optical isomerism of, and its oximes and their benzoyl derivatives (Wallach and Kempe), 1904, A., i, 755.
  action of alkyl iodides on the sodium derivative of (Haller), 1905, A., i, 214.
  condensation of, with ethyl α-bromopropionate (Wallach and Evans), 1908, A., i, 404.
  action of potassium hydroxide on a mixture of, with phenylacetylene (Bertrond), 1905, A., i, 775.
  azine of, conversion of, into 1-methylcyclohexyl-3-hydrazine (Kijner), 1908, A., i, 106.
  hydrazone and other derivatives of (Merkin), 1911, A., i, 64.
**1-Methyl*cyclo*hexan-3-one**, 4-bromo-, 4-chloro-, and 4-hydroxy- (Kötz and Steinhorst), 1911, A., i, 211.
**1-Methyl*cyclo*hexan-4-one** and its semicarbazone (Perkin), 1906, T., 836.
  condensation of, with ethyl α-bromopropionate (Wallach and Evans), 1908, A., i, 404.
  compounds from (Wallach and Evans), 1907, A., i, 618.
  synthesis of tertiary alcohols from (Sabatier and Mailhe), 1906, A., i, 254.
**1-Methyl*cyclo*hexan-4-one**, 3-bromo-, 3-chloro-, and 3-hydroxy- (Kötz and Steinhorst), 1911, A., i, 211.
  3:5-*di*oximino-, and its dibenzoate, phenylhydrazone, semicarbazone, and trioxime (Borsche), 1910, A., i, 179.
**Methyl*cyclo*hexanones**, and the corresponding methylcyclohexanols (Sabatier and Mailhe), 1905, A., i, 275.
**Methyl*cyclo*hexanones**, action of light on (Ciamician and Silber), 1908, A., i, 277.
  2-, 3-, and 4-, properties of, and their oximes (Wallach), 1906, A., i, 514.
    glycidic esters of (Darzens), 1907, A., i, 627.
  condensation of, with ethyl α-bromo isobutyrate (Wallach and Churchill), 1908, A., i, 406.
  condensation of, with ethyl chloroacetate (Darzens and Lefébure), 1906, A., i, 431.
  condensation of, with ethyl α-bromo-*n*-butyrate (Wallach and Rentschler), 1908, A., i, 405.
**1-Methyl*cyclo*hexan-3-one-4-acetic acid**, ethyl ester, and its semicarbazone (Kötz and Kayser), 1907, A., i, 60.
**1-Methyl*cyclo*hexan-3-one-4-acetic-4-carboxylic acid**, ethyl ester, and its semicarbazone (Kötz and Bieber), 1907, A., i, 60.
**1-Methyl*cyclo*hexan-2-one-1-carboxylic acid**, ethyl ester, and its semicarbazone, synthesis of (Kötz and Michels), 1907, A., i, 58.
**1-Methyl*cyclo*hexan-2-one-3-carboxylic acid** (Gardner, Perkin, and Watson), 1910, T., 1765; P., 137.
**1-Methyl*cyclo*hexan-2-one-4-carboxylic acid** and its ethyl ester, oxime, and semicarbazone, preparation of (Meldrum and Perkin), 1908, T., 1425.
**1-Methyl*cyclo*hexan-2-one-5-carboxylic acid** and its oxime and semicarbazone, synthesis of (Fisher and Perkin), 1908, T., 1880.
**1-Methyl*cyclo*hexan-2-one-6-carboxylic acid** and its semicarbazone (Baudisch and Perkin), 1909, T., 1886.
**1-Methyl*cyclo*hexan-3-one-4-carboxylic acid**, ethyl ester, and its compound with phenylhydrazine (Kötz and Hesse), 1906, A., i, 88.
  anilinoanilide from, and quinazoline derivative (Kötz and Merkel), 1909, A., i, 157.
**1-Methyl*cyclo*hexan-3-one-4-carboxylic acid**, 4-chloro- and 1-bromo-, ethyl esters (Kötz), 1910, A., i, 259.
**1-Methyl*cyclo*hexan-3-one-5-carboxylic acid** and its ethyl ester (Meldrum and Perkin), 1909, T., 1899.
**1-Methyl*cyclo*hexan-3-one-6-carboxylic acid**, ethyl ester (Skita and Paal), 1911, A., i, 449.
**1-Methyl*cyclo*hexan-4-one-3-carboxylic acid** (Gardner, Perkin, and Watson), 1910, T., 1769; P., 137.

**1-Methyl*cyclo*hexan-2- and-4-one-3-carboxylic acids**, ethyl esters, and their semicarbazones (KÖTZ and MICHELS), 1906, A., i, 666.

*dl*- and *d*-**1-Methyl*cyclo*hexan-3-one-4-carboxylic acids**, and their ethyl esters (GARDNER, PERKIN, and WATSON), 1910, T., 1767; P., 137.

**1-Methyl*cyclo*hexan-2-one-1:3-dicarboxylic acid**, ethyl ester, and its semicarbazone, synthesis of (KÖTZ and MICHELS), 1907, A., i, 58.

**1-Methyl*cyclo*hexan-3-one-4-dicarboxylic acid**, ethyl ester (KÖTZ and HARZER), 1907, A., i, 59.

**1-Methyl*cyclo*hexan-3-one-*m*-nitrophenylhydrazone** (BORSCHE, WITTE, and BOTHE), 1908, A., i, 367.

**β-Methylhexan-δ-one-γ-ol** and its semicarbazone (GAUTHIER), 1911, A., i, 415.

**1-Methyl*cyclo*hexan-3-one-1-ol-4:6-dicarboxylic acid**, ethyl ester, and its dienolic isomeride (RABE), 1904, A., i, 748.

**1-Methyl*cyclo*hexan-2-one-3-oxalic acid**, ethyl ester (KÖTZ and MICHELS), 1906, A., i, 666.

**1-Methyl*cyclo*hexan-3-one-4-oxalic acid** and its ethyl ester and their semicarbazones (KÖTZ and HESSE), 1906, A., i, 88.

**3-Methyl*cyclo*hexanonephenylcarbamic acid** hydrazone (BORSCHE and MERKWITZ), 1904, A., i, 946.

**β-4-Methyl*cyclo*hexan-2-onyl-β-phenylethyl styryl ketone** (CRUIKSHANKS and SCHWYZER), 1912, A., i, 785.

**1-Methyl-3-*cyclo*hexanoxide**, sodium derivative, action of aromatic aldehydes on (HALLER and MARCH), 1905, A., i, 771.

**β-Methyl*cyclo*hexanyl** hydrogen phthalate (TSCHECHOWITSCH), 1907, A., i, 420.

**Methyl *cyclo*hexanyl ketone** and its *p*-nitrophenylhydrazone (v. BRAUN), 1907, A., i, 893.

**γ-Methyl-Δβ-hexene** (BJELOUSS), 1912, A., i, 229.

**1-Methyl-$\Delta^1$-*cyclo*hexene** and its dibromide (ZELINSKY and GORSKY), 1908, A., i, 722.
and its chloronitrosite (FAWORSKY and BORGMANN), 1908, A., i, 15.

**1-Methyl-$\Delta^1$-*cyclo*hexene**, 4-bromo- (PERKIN), 1911, T., 760.

**1-Methyl-$\Delta^3$-*cyclo*hexene** and its chlorohydrin, oxide, and chloro-ketone (MARKOWNIKOFF and STADNIKOFF), 1903, A., i, 803.

**Methyl*cyclo*hexenes** (*heptanaphthylenes*) (MARKOWNIKOFF), 1903, A., i, 19, 157; (MARKOWNIKOFF and STADNIKOFF), 1903, A., i, 803.
structure of, and some of their compounds (MARKOWNIKOFF), 1904, A., i, 383, 384.

**1-Methyl-$\Delta^1$- and -$\Delta^2$-*cyclo*hexenes**, nitrosates, nitrosites, and nitrosochlorides, and dihalogen derivatives (MURAT), 1909, A., i, 148.

**1-Methyl-$\Delta^1$-*cyclo*hexene-2-acetic acid** and its ethyl ester (WALLACH and BESCHKE), 1906, A., i, 565.

**1-Methyl*cyclo*hexene-3-acetic acid**, constitution of, and its amide, dibromide, and nitrile (WALLACH and BESCHKE), 1906, A., i, 565.

**1-Methyl-$\Delta^2$-*cyclo*hexene-3-acetic acid** and its nitrile, and α-cyano- and its ethyl ester (HARDING and HAWORTH), 1910, T., 494.

**1-Methyl*cyclo*hexene-4-acetic acid** and its amide and nitrile (WALLACH and EVANS), 1907, A., i, 618.
and its silver salt (WALLACH and EVANS), 1906, A., i, 566.

**1-Methyl-$\Delta^3$-*cyclo*hexene-4-acetic acid** and its ethyl ester and nitrile (HARDING, HAWORTH, and PERKIN), 1908, T., 1967; P., 230.

**1-Methyl-$\Delta^3$-*cyclo*hexene-4-acetic acid**, α-cyano-, and its ethyl ester (HARDING, HAWORTH, and PERKIN), 1908, T., 1963.

**2-, 3-, and 4-Methyl*cyclo*hexeneacetyl chlorides** (DARZENS and ROST), 1911, A., i, 988.

**Methyl*cyclo*hexenealdehydes.** See Tetrahydrotolualdehydes.

**4-Methyl-$\Delta^1$-*cyclo*hexene-1-*iso*butyric acid** and its ethyl ester (WALLACH), 1906, A., i, 682.

**1-Methyl*cyclo*hexene-*n*-butyric acids** and their ethyl esters and silver salts (WALLACH and RENTSCHLER), 1908, A., i, 405.

**1-Methyl*cyclo*hexene-2-, -3-, and -4-*iso*butyric acids** and their derivatives (WALLACH and CHURCHILL), 1908, A., i, 406.

**Methyl*cyclo*hexenecarboxylic acid** (GARDNER, PERKIN, and WATSON), 1910, P., 137.

**1-Methyl-$\Delta^3$-*cyclo*hexene-2-carboxylic acid** and its oxidation and ethyl ester (KAY and PERKIN), 1905, T., 1072.

**1-Methyl-$\Delta^4$-*cyclo*hexene-2-carboxylic acid** and its ethyl ester (PERKIN), 1911, T., 754.

**1-Methyl-$\Delta^5$-*cyclo*hexene-2-carboxylic acid**, and its ethyl ester (PERKIN), 1911, T., 734; P., 95.

**1-Methyl-$\Delta^{6}$-*cyclo*hexene-2-carboxylic** acid and its ethyl ester and 1:6-*di*bromo- (Perkin), 1911, T., 738; P., 95.

**1-Methyl-$\Delta^{1}$-*cyclo*hexene-3-carboxylic** acid and its ethyl ester (Perkin and Tattersall), 1906, P., 269; 1907, T., 496.

*d*-**Methyl-$\Delta^{1}$-*cyclo*hexene-3-carboxylic** acid and its ethyl ester (Perkin), 1910, P., 97.

*dl*-**Methyl-$\Delta^{3}$-*cyclo*hexene-3-carboxylic** acid, resolution of, its optically active components and their ethyl esters (Luff and Perkin), 1911, T., 521; P., 57.

*dl*-**1-Methyl-$\Delta^{4}$-*cyclo*hexene-3-carboxylic acid**, ethyl ester (Perkin), 1910, T., 2146.

**1-Methyl-$\Delta^{6}$-*cyclo*hexene-3-carboxylic** acid and its calcium salt and ethyl ester, synthesis of (Fisher and Perkin), 1908, T., 1885; P., 228.

**1-Methyl-$\Delta^{1}$-*cyclo*hexene-4-carboxylic** acid and its ethyl ester (Perkin), 1904, T., 657; P., 86.

  formation of, from *cis*- and *trans*-1-methylcyclohexan-2-ol-4-carboxylic acids (Meldrum and Perkin), 1908, T., 1416; P., 187.

*dl*-**1-Methyl-$\Delta^{1}$-*cyclo*hexene-4-carboxylic** acid, resolution of (Fisher and Perkin), 1908, T., 1871; P., 228.

**1-Methyl-$\Delta^{3}$-*cyclo*hexene-4-carboxylic** acid and its optically active modifications (Perkin), 1906, T., 835; (Kay and Perkin), 1906, T., 840; P., 72.

  and its ethyl ester (Perkin and Pickles), 1905, T., 645; P., 130.

  ethyl ester, density, magnetic rotation, and refractive power of (Perkin), 1906, T., 852.

*d*-**1-Methyl-$\Delta^{3}$-*cyclo*hexene-4-carboxylic** acid and its ethyl ester (Chou and Perkin), 1911, T., 533; P., 57.

*cis*- and *trans*-**1-Methyl-$\Delta^{3}$-*cyclo*hexene-2-carboxylic acids** and their ethyl esters and 2:5-*di*bromo- (Perkin), 1911, T., 750.

**1-Methyl-$\Delta^{1}$-** and **$\Delta^{6}$-*cyclo*hexene-3-carboxylic acids** and their ethyl esters, and oxidation, and reaction of the esters with magnesium methyl iodide (Perkin and Tattersall), 1905, T., 1085.

*dl*-, *d*-, and *l*-**1-Methyl-$\Delta^{5}$-*cyclo*hexene-3-carboxylic acids** and their ethyl esters and calcium salt of the former (Perkin), 1910, T., 2138, 2140, 2142.

**1-Methyl-$\Delta^{1}$-*cyclo*hexene-4:6-dione** (1:3-*diketo*-4-*methyltetrahydrobenzene*), pentachloro- (Zincke, Schneider, and Emmerich), 1903, A., i, 759.

α-**1-Methyl-$\Delta^{2}$-*cyclo*hexene-3-propionic** acid and its nitrile, and α-cyano- and its methyl ester (Harding and Haworth), 1910, T., 496.

α-**1-Methyl-$\Delta^{3}$-*cyclo*hexene-4-propionic** acid and its methyl ester and nitrile, and α-cyano-, and its methyl ester (Harding, Haworth, and Perkin), 1908, T., 1973.

**1-Methyl*cyclo*hexenepropionic acids** and their ethyl esters and silver salts (Wallach and Evans), 1908, A., i, 404.

**δ-Methylhexenoic acid** (Knoevenagel), 1905, A., i, 169.

**δ-Methyl-$\Delta^{\alpha}$-hexenoic acid**, α-cyano- (Knoevenagel), 1905, A., i, 169.

*tert.*-**Methylhexenol**, ozonide of (Harries and Langheld), 1906, A., i, 226.

**γ-Methyl-$\Delta^{\beta}$-hexen-δ-ol**, and its acetate and chloride (Abelmann), 1910, A., i, 455.

**δ-Methyl-$\Delta^{\beta}$-hexen-δ-ol** (Gry), 1908, A., i, 307.

**ζ-Methyl-$\Delta^{\beta}$-hexen-δ-ol** and its acetate (Reif), 1908, A., i, 847.

**δ-Methyl-$\Delta^{\delta}$-hexen-γ-ol** and its acetate (Abelmann), 1908, A., i, 2.

**1-Methyl-$\Delta^{1(\text{or }2)}$-*cyclo*hexen-2-ol**, acetate of (Mannich and Hâncu), 1908, A., i, 276.

**1-Methyl-$\Delta^{1}$-*cyclo*hexen-2-ol**, 3:3:4:5:5:6-*hexa*chloro- (Zincke and Pfaffendorf), 1912, A., i, 964.

**1-Methyl-$\Delta^{3}$-*cyclo*hexen-4-ol**, acetate of (Mannich and Hâncu), 1908, A., i, 276.

**1-Methyl-$\Delta^{6}$-*cyclo*hexen-4-ol-2-carboxylic acid** and its lactone (Baudisch, Hibbert, and Perkin), 1909, T., 1881; P., 249.

**1-Methyl-$\Delta^{1}$-*cyclo*hexen-2-ol-6-one** (Blaise and Maire), 1908, A., i, 392.

**β-Methyl-$\Delta^{\beta}$-hexen-δ-one** (Blaise and Maire), 1909, A., i, 85.

**1-Methyl-$\Delta^{3}$-*cyclo*hexen-2-one** and its semicarbazone (Kötz and Steinhorst), 1911, A., i, 211.

**1-Methyl-$\Delta^{1}$-*cyclo*hexen-3-one**, isomerism of (Rabe and Ehrenstein), 1907, A., i, 626; (Rabe and Pollock), 1912, A., i, 987.

  addition of ethyl acetoacetate to (Rabe), 1904, A., i, 509.

**1-Methyl-$\Delta^{1}$-*cyclo*-hexen-3-one**, semicarbazone of (Simonsen and Storey), 1909, T., 2112.

**1-Methyl-$\Delta^{3}$-*cyclo*hexen-3-one** and its semicarbazone (Kötz and Steinhorst), 1911, A., i, 211.

**1-Methyl-$\Delta^{2}$-*cyclo*hexen-4-one** and its semicarbazone (Kötz and Steinhorst), 1911, A., i, 211.

**1-Methyl-$\Delta^{3}$-*cyclo*hexen-5-one** and its semicarbazone (Kötz and Grethe), 1910, A., i, 25.

**1-Methyl*cyclo*hexen-3-one-6-carboxylic acid**, ethyl ester (Skita and Paal), 1911, A., i, 449.

**1-Methyl-$\Delta^{1}$-*cyclo*hexen-3-one-6-carboxylic acid**, ethyl ester (*Hagemann's ester*), and its semicarbazone (Rabe and Rahm), 1905, A., i, 348; (Merling), 1905, A., i, 350.
  tautomerism of (Rabe and Spence), 1906, A., i, 89.

**2-Methyl-$\Delta^{2}$-*cyclo*hexen-4-one-1-carboxylic acid**, ethyl ester, and its derivatives (Dieckmann), 1912, A., i, 857.

**1-Methyl-$\Delta^{3}$-*cyclo*hexen-5-one-4-carboxylic acid** and its ethyl ester (Kötz and Grethe), 1910, A., i, 25; (Kötz), 1910, A., i, 258.

**1-Methyl-$\Delta^{1}$-*cyclo*hexen-3-one-4:6-dicarboxylic acid**, ethyl ester, desmotropy of, and its sodium salt, *p*-nitrophenylhydrazone, and semicarbazone (Rabe, Spence, and Ehrenstein), 1908, A., i, 530.

**γ-Methyl-$\Delta^{\epsilon}$-hexenoylacetic acid**, ethyl ester (Moureu and Delange), 1903, A., i, 400.

**Methyl*cyclo*hexenylglycidic acid**, ethyl ester (Darzens and Rost), 1910, A., i, 856.

**1-Methyl-$\Delta^{1}$-*cyclo*hexenylideneacetic acid**, ethyl ester (Auwers and Eisenlohr), 1911, A., ii, 783.

**1-Methyl*cyclo*hexenylidene-3-cyanoacetic acid**, ethyl ester (Knoevenagel and Mottek), 1905, A., i, 62.

**α-Methyl-$\Delta^{\gamma}$-hexinen-β-ol** (Dupont), 1909, A., i, 546.

**β-Methyl-*n*-hexoamide** (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 259.

**α-Methylhexoic acid** and its esters, amide, and chloride (Rasetti), 1905, A., i, 561.

**α-Methylhexoic acid**, bromo-, and its ethyl ester (Blaise and Luttringer), 1905, A., i, 628.
  δ-cyano-, and its silver salt, preparation of (Best and Thorpe), 1909, T., 706.

**α-Methylhexoic acid**, β-imino-α-cyano-, ethyl ester (Baron, Remfry, and Thorpe), 1904, T., 1755.

**β-Methylhexoic acid**, α-bromo-, and α-iodo-, guaiacol esters of (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 630.
  α-cyano-, and its ethyl ester (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 259.

**γ-Methylhexoic acid** (Ciamician and Silber), 1908, A., i, 277.

**α-Methyl-*n*- and -*iso*-hexoic acids**, α-amino-, copper salts and their nitriles, hydrochlorides of (v. Gulewitsch and Wasmus), 1906, A., i, 410.

**α-Methylhexonitrile**, α-hydroxy- (Ultée), 1909, A., i, 294.

**Methyl-*n*- and -*iso*-hexoylacetic acids**, ethyl esters (Locquin), 1904, A., i, 552.

**β-Methylhexyl** iodide (Zelinsky and Prschevalsky), 1908, A., i, 845.

**Methyl*cyclo*hexyl** *di*bromide (*heptanaphthylene dibromide*) (Stadnikoff), 1904, A., i, 666.
  3-hydrosulphide (Borsche and Lange), 1907, A., i, 599.

**1-Methyl*cyclo*hexyl-4-acetic acid** and its halogen derivatives, amide, and nitrile (Wallach and Evans), 1907, A., i, 619.
  and its silver salt, and α-bromo-, and its ethyl ester, and β-bromo-, and α-hydroxy, and its silver salt (Perkin and Pope), 1908, T., 1081.

**1-Methyl*cyclo*hexyl-4-acetic acid**, 4-bromo-, preparation of (Perkin and Pope), 1911, T., 1513.
  3:4-*di*bromo-, and 3:4-*di*hydroxy-, and its lactone (Harding, Haworth, and Perkin), 1908, T., 1969.
  4-bromo-3-hydroxy-, lactone of (Harding, Haworth, and Perkin), 1908, T., 1970.

*dl*-, *d*-, and *l*-**Methyl*cyclo*hexyl-4-acetic acids**, α- and β-4-*di*bromo- (Perkin and Pope), 1911, T., 1518.

**4-Methyl*cyclo*hexylacetyl** chloride (Darzens and Rost), 1911, A., i, 988.

**β-Methyl-β-hexylacrylic acid** (Gardner and Haworth), 1909, T., 1964.

**β-Methyl-β-hexylacrylonitrile** (Gardner and Haworth), 1909, T., 1964.

**β-Methyl*cyclo*hexyl allyl ether** (Haller and March), 1904, A., i, 751.

**γ-Methylhexylamine**, ε-hydroxy-, and its oxalate (Wohl and Maag), 1911, A., i, 25.

- **4′-Methyl*cyclo*hexylamino-4-methyl-*cyclo*hexane** and its phenylcarbamide (Sabatier and Mailhe), 1912, A., i, 103.
- **1-Methyl*cyclo*hexylamylamine** (Wallach), 1906, A., i, 161.
- **3-Methyl-1-hexylbenzoxazole,** 5-hydroxy- (Henrich and Opfermann), 1904, A, i, 934.
- **Methylhexylcarbinol,** resolution of (Pickard and Kenyon), 1907, T., 2058 ; P., 286.
- *d*-**Methyl-*n*-hexylcarbinol,** salts of (Hilditch), 1911, T., 222 ; P., 6.
  - strychnine salt of the hydrogen phthalate of (Pickard and Kenyon), 1911, T., 61.
- **Methyl*iso*hexylcarbinol** and its acetate (Buelens), 1909, A., i, 78.
- **1-Methyl*cyclo*hexyl-4-carbinol** and its bromide (Perkin and Pope), 1908, T., 1078.
- *l*-**1-Methyl*cyclo*hexyl-4-chlorobromoacetic acid,** 4-chloro- (Perkin and Pope), 1911, T., 1527.
- **2:4- and 4:2-Methylhexyldihydro-6-pyridones,** 5-cyano- (Issoglio), 1905, A., i, 610.
- **1-Methyl*cyclo*hexyl-3-hydrazine,** formation of (Kijner), 1908, A., i, 106.
  - derivatives of (Merkin), 1911, A., i, 64.
- **Methyl*cyclo*hexylhydrazonemethyl*cyclo*hexanone** (Kijner), 1908, A., i, 107.
- **1-Methyl*cyclo*hexylidene-4-acetic acid** and its ethyl ester (Perkin and Pope), 1906, P., 107.
  - experiments on the synthesis of, and its ethyl ester (Perkin and Pope), 1908, T., 1075 ; P., 145 ; (Harding, Haworth, and Perkin), 1908, T., 1943 ; P., 230.
  - molecular configuration of (Everest), 1911, P., 285.
  - optical isomerides of (Perkin and Pope), 1906, P., 108 ; (Marckwald and Meth), 1906, A., i, 360, 584, 663.
  - optically active derivatives of (Perkin and Pope), 1911, T., 1510 ; P., 212.
  - resolution of, and brucine salts of the *d*- and *l*-acids (Perkin, Pope, and Wallach), 1909, T., 1789.
  - amide of (Wallach), 1909, A., i, 384.
- *d*-**1-Methyl*cyclo*hexylidene-4-acetic acid,** rotatory power of (Perkin and Pope), 1911, T., 1525.
- **2- and 3-Methyl*cyclo*hexylideneacetic acids** and their ethyl and methyl esters (Auwers and Ellinger), 1912, A., i, 188.
- *d*- and *l*-**1-Methyl*cyclo*hexylidene-4-bromoacetic acid** (Perkin and Pope), 1911, T., 1524.
- **Methyl hexyl ketone** and its oxime and semicarbazone (Moureu and Delange), 1903, A., i, 400.
  - semicarbazone of (Bouveault and Locquin), 1905, A., i, 18.
- **Methyl *iso*hexyl ketone** and its methyl ether (Buelens), 1909, A., i, 78.
- **Methylhexylketoxime** (Fulda), 1903, A., i, 199.
- **1-Methyl*cyclo*hexyl-4-malonic acid** and its ethyl ester and potassium salt, and α-bromo-, and its ethyl ester (Hope and Perkin), 1909, T., 1367 ; P., 207.
- **Methyl*cyclo*hexylmethyl*cyclo*hexylidenehydrazine** (Merkin), 1911, A., i, 64.
- **1-Methyl*cyclo*hexyl methyl ketone** and its semicarbazone (Wallach and Haworth), 1912, A., i, 569.
- **1-Methyl*cyclo*hexyl methyl ketone,** 4-hydroxy-, and its oxime and semicarbazone (Wallach), 1910, A., i, 569.
- *N*-**Methyl*cyclo*hexyl-*S*-*p*-nitrobenzyl*di*thiourethane** (v. Braun), 1903, A., i, 15.
- **Methyl*iso*hexylpinacone** (Clarke), 1909, A., i, 125.
- **1-Methyl*cyclo*hexyl-4-tartronic acid** and its barium salt (Hope and Perkin), 1909, T., 1368.
- *p*-**Methylhippuric acid,** ethyl ester, and nitrile (Klages and Haack), 1903, A., i, 560.
- **Methylhomocamphoric acids,** α- and β- (Minguin), 1904, A., i, 138.
- *N*-**Methylhomo-cincholeupone** and **-meroquinenine** and their esters and salts (Koenigs, Bernhart, and Ibele), 1907, A., i, 717.
- **Methylhomoeriodictyol** (Power and Tutin), 1907, T., 895.
- **2-Methylhomolimonene** (*2-methyldihydrocarvene*) and its hydrobromide (Rupe and Emmerich), 1908, A., i, 433.
- **Methylhomonarceine** and its ethyl ester and their hydrochlorides (Tambach and Jaeger), 1906, A., i, 880.
- *N*-**Methylhomopapaverinium** derivatives (Decker and Dunant), 1908, A., i, 205.
- **Methylhomophthalic acid,** hydroxy-, methyl ester, α- and β-, *m*-nitrobenzoates of (Dieckmann and Meiser), 1908, A., i, 895.
- **1-Methylhydantoin** and bromo- (Andreasch), 1903, A., i, 157.

- 1 **Methylhydantoin**, action of bromine on (Gabriel), 1906, A., i, 634.
  - β-acetyl derivative (Siemonsen), 1904, A. i, 952.
- **3-Methylhydantoin**, preparation of (Weitzner), 1908, A., i, 841.
  - oxime and phenylhydrazone (Schmidt and Thumann), 1912, A., i, 719.
- **3-Methylhydantoin**, chloro-, and hydroxy- (Behrend and Niemeyer), 1909, A., i, 258.
- **4-Methylhydantoin** (*α-lactylcarbamide*) and related compounds, action of bromine on (Gabriel), 1907, A., i, 90.
- **4-Methylhydantoin**, 2-thio- (Wheeler, Nicolet, and Johnson), 1911, A., i, 1032.
- **Methylhydantoins**, isomerism of the (Harries and Weiss), 1903, A., i, 738; (Harries), 1908, A., i, 573.
- **1-Methylhydantoylamide**, 5-hydroxy- (Biltz and Topp), 1911, A., i, 692.
- α-**Methylhydracrylic acid** and its phenylhydrazide and phenylurethane (Blaise and Herman), 1909, A., i, 633.
- **Methylhydrasteine**, oximino-derivative of (Rabe and McMillan), 1911, A., i, 77.
- **1-Methylhydrastinine** hydrochloride (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 1015.
- *p*-**Methylhydratropaldehyde** and its semicarbazone (Auwers), 1906, A., i, 963; (Darzens), 1907, A., i, 182.
- *p*-**Methylhydratropic acid**, α-chloro- (Auwers), 1906, A., i, 963.
- **Methylhydrazine**, acyl derivatives, constitution of (Michaelis and Hadanck), 1908, A., i, 1020.
- **Methylhydrazine**, nitroso-, and its benzoyl derivative (Thiele), 1910, A., i, 888.
- *N*-**Methylhydrazobenzene** (Rassow and Berger), 1911, A., i, 821.
- *N*-**Methylhydrazo-*o*-toluene** (Rassow and Becker), 1911, A., i, 932.
- *dl*-**Methylhydrindamine**, resolution of (Tattersall), 1903, P., 287; 1904, T., 169; (Kipping), 1909, T., 411; P., 55.
  - *d*-bromocamphorsulphonates, isomeric (Tattersall and Kipping), 1903, T., 918; P., 145; (Kipping), 1903, T., 937; P., 166.
  - *d*-chlorocamphorsulphonates, isomeric (Tattersall), 1903, P., 288; 1904, T., 169.
- β-**Methyl-α-hydrindamine** and its platinichlorides and benzoyl derivatives (Kipping and Clarke), 1903, T., 913.
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- **1-Methyl-1-hydrindenol**, 2:2:3:3-*di*bromo- (Simonis and Kirschten), 1912, A., i, 270.
- **2-Methyl-1-hydrindone** and its oxime (Kipping and Clarke), 1903, T., 915.
  - and its phenylhydrazone and semicarbazone (Mitchell and Thorpe), 1910, T., 2275.
  - oxidation of (Salway and Kipping), 1909, T., 166; P., 16.
- **2-Methyl-1-hydrindone**, bromo- (Salway and Kipping), 1909, T., 170.
- **4-Methyl-1-hydrindone**, 7-hydroxy-, and its derivatives (Auwers), 1912, A., i, 107.
- **1-Methyl-2-hydrindone** and its semicarbazone (Wallach and Beschke), 1904, A., i, 987.
- **1-Methyl-2-hydrindone**, 1:3:3-*tri*chloro-5-bromo- (Fries and Hempelmann), 1909, A., i, 810.
  - α-cyano-, and its phenylhydrazone (Moore and Thorpe), 1908, T., 181; P., 13.
- **3-Methyl-1-hydrindone-2-acetic acid**, 3-hydroxy-, lactone and semicarbazone of (Stobbe and Rose), 1904, A., i, 503.
- **2-Methyl-1-hydrindone-2-carboxylic acid**, ethyl ester, and its semicarbazone (Mitchell and Thorpe), 1910, T., 2274.
- *p*-**Methylhydrocinnamic acid**. See β-*p*-Tolylpropionic acid.
- α-**Methylhydrocotarnine** and its additive salts (Freund), 1904, A., i, 187.
- **1-Methylhydrocotarnine**, oxidation of (Freund and Reitz), 1906, A., i, 601.
- **3-[2-Methylhydrocoumarilyl]-4-methylcoumarin** (Fries and Volk), 1911, A., i, 203.
- **1-[2-Methylhydrocoumarilyl]-2-methylhydrocoumarone** and its oxime (Fries and Volk), 1911, A., i, 203.
- α-**Methylhydrohydrastinine** and its salts (Freund and Lederer), 1911, A., i, 906.
- **1-Methylhydrothymine**, 5-bromo-4-hydroxy-, and 5-nitro-4-hydroxy- (Johnson and Clapp), 1908, A., i, 835.
- **3-Methylhydrothymine**, 5-nitro-4-hydroxy- (Johnson and Clapp), 1908, A., i, 836.

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**α-Methylhydroxycamphor,** α-nitro- (Forster and Withers), 1911, P., 327 ; 1912, T., 1332.

**3-Methyl-1:7-ββ′-*di*hydroxydiethylxanthine** (Farbenfabriken vorm. F. Bayer & Co.), 1908, A., i, 475.

**6-Methyl-2′-hydroxydiphenylamine,**2:4-*di*nitro- (Ullmann and Sané), 1912, A., i, 104.

**Methyl-β-hydroxyethylamino*iso*butylcarbinol** (*ethanoldiacetonalkamine*), and its methyl derivative and their platinichlorides (Kohn), 1905, A., i, 929.
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**1-Methyl-3-α-hydroxyethylpiperidine** (Lipp and Widnmann), 1905, A., i, 663.

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**4-Methyl-2-β-hydroxyethylquinoline** and its salts (Koenigs and Mengel), 1904, A., i, 528.

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**3-Methyl-5-hydroxymethylbenzoic acid,** 2-hydroxy-, and its anhydride (Anilinfarben- & Extrakt-Fabriken vorm. J. R. Geigy), 1911, A., i, 978.

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**β-Methyl-γ-hydroxy*iso*propyladipic acid,** lactone of, and its ethyl ester (Perkin), 1911, T., 758.

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**4-Methyl-2-αγ-*di*hydroxy*iso*propylquinoline** and its salts (Koenigs and Mengel), 1904, A., i, 528.

**3-Methylhypoxanthine** and thio- (Traube and Winter),1906, A.,i,390.

**β-Methyliminoadipic acid,** α-cyano-, ethyl hydrogen ester, and its silver salt (Best and Thorpe), 1909, T., 1536.

**α-Methylimino-α-benzoylpropionic acid** (Mumm and Münchmeyer), 1911, A., i, 79.

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**2-Methylimino-4:6-dimethyldihydropyrimidine** (Majima and Kobayaski), 1908, A., i, 224.

**2-Methylimino-3:4-dimethyl-2:3-dihydrothiazole** hydriodide (Young and Crookes), 1905, P., 308.

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**2-Methylimino-4-methyltetrahydro-6-pyrimidone** and its additive salts (Majima), 1908, A., i, 223.

**5-Methylimino-1-phenyl-2:3-di-** and **-2:3:4-tri-methylpyrazolones** and their additive salts (Stolz), 1904, A., i, 114.

**Methyliminophthalanil** (Reissert and Holle), 1911, A., i, 982.
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**2-Methylindamine**, 4-hydroxy- (Heller), 1912, A., i, 918.
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**1-Methylindene**, 1:2:3-*tri*bromo-, and its acetyl derivative (Simonis and Kirschten), 1912, A., i, 270.
**3-Methylindene** and its nitrosochloride and 2-nitro- (Wallach and Beschke), 1904, A., i, 987.
**1-Methylindene-2-carboxylic acid** and its esters (Thiel and Rüdiger), 1906, A., i, 588.
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**3-Methylindophenol,** 4′-amino- (Heller), 1912, A., i, 918.
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**3-Methyl-$\Delta^{2:8(9)}$-menthadiene** (Rupe and Ebert), 1908, A., i, 663.
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**2-Methyl-$\Delta^{6:8(9)}$-menthadien-2-ol** and **-$\Delta^{2:6:8(9)}$-menthatriene** (Rupe and Leichtenhan), 1906, A., i, 374; (Klages and Sommer), 1906, A., i, 567.
**2-Methylmenthane**, 2:8-*di*hydroxy- (Rupe and Emmerich), 1908, A., i, 433.
**3-Methylmenthan-3-ol** (1:3-*dimethyl*-6-iso*propyl*cyclo*hexan*-1-*ol*) (Vanin), 1912, A., i, 788.
**2-Methylmenthatriene** (Rupe and Emmerich), 1908, A., i, 433.
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**3-Methyl-$\Delta^{8(9)}$-menthene**, 3-chloro- (Rupe and Ebert), 1908, A., i, 663.
**Methylmenthone** (Arbusoff), 1908, A., i, 555.
and its semicarbazone (Rupe, Schobel, and Abegg), 1912, A., i, 573.
***N*-Methylmeroquinenine** and its derivatives (Rabe and Ritter), 1907, A., i, 78.
**Methylmeroquinine**, derivatives of (Rabe and Ritter), 1905, A., i, 811.
**Methylmesaconic acid**, oxidation of (Fittig and Dannenberg), 1904, A., i, 555.
**Methylmesidine** and its acetyl derivative (Bamberger and Rudolf), 1907, A., i, 122.
and nitroso- (Ullmann), 1903, A., i, 395.
**1-Methyl-3-methenyl-1-*cyclo*hexene** (Auwers and Eisenlohr), 1911, A., ii, 782.
**Methylmethoxy*iso*propylketoxime** and its benzoyl derivative and phenylcarbimide (Schmidt and Austin), 1903, A., i, 2, 3.
**Methyl-β-methylallylamino*iso*butylcarbinol** and its additive salts (Kohn and Schlegl), 1907, A., i, 683.
**Methyl-β-methylamino*iso*amylcarbinol** and its bromo-derivative (Kohn), 1907, A., i, 679.
**Methyl-β-methylamino*iso*butylcarbinol** (*methyldiacetonalkamine*), aurichloride (Kohn), 1905, A., i, 929.
**Methyl methylaminobutyl ketone** and its oxime and semicarbazone and their hydrochlorides (Lipp and Widnmann), 1905, A., i, 662.
**Methyl-β-methylamino*iso*heptylcarbinol** and its additive salts and nitroso-derivative (Kohn and Giaconi), 1907, A., i, 680.

**4(or 5)-Methyl-5(or 4)-methylaminomethylglyoxaline** and its salts (Ewins), 1911, T., 2058; P., 259.

**Methyl α-methylbutyl ketone** (Ahrens and Blümel), 1903, A., i, 813.

**2-Methyl-4-methylene-1:4-benzopyranol-3-phthalylaldehydic acid,** 7:8-*di*hydroxy-, lactone of, and its additive salts (Bülow and Deseniss), 1906, A., i, 966.

**5-Methyl-2-methylenecoumaran,** 1:1:4:6-*tetra*bromo- (Fries and Volk), 1910, A., i, 333.

**5-Methyl-2-methylenecoumaran-1-one,** 4:6-*di*bromo-, and its methyl ester (Fries and Volk), 1910, A., i, 333.

**4-Methyl-5-methylenedihydrouracil,** 4-bromo- (Kircher), 1912, A., i, 54.

**β-Methyl-δ-methyleneheptane** (Clarke and Beggs), 1912, A., i, 150.

**β-Methyl-ε-methyleneheptane** (Clarke and Beggs), 1912, A., i, 151.

**1-Methyl-2-methylene*cyclo*hexane** and its oxidation and nitrosochloride and nitrolamine with piperidine (Wallach and Beschke), 1906, A., i, 565.

**1-Methyl-3-methylene*cyclo*hexane** and its oxidation, and nitrosochloride and nitrolamine with piperidine (Wallach and Beschke), 1906, A., i, 566.

**1-Methyl-4-methylene*cyclo*hexane** (Marckwald and Meth), 1906, A., i, 584, 663.
  and its oxidation, and nitrosochloride and nitrolamine with piperidine (Wallach and Evans), 1906, A., i, 566.

**β-Methyl-ε-methylene-$\Delta^{\gamma}$-hexinen-β-ol** (Dupont), 1911, A., i, 174.

**4-Methyl-*o*-methylenequinone,** 3:5:6-*tri*bromo- (Zincke and Breitwieser), 1911, A., i, 216.

**Methyl-β-methylethylamino*iso*butylcarbinol** and its methiodide and their salts and its benzoate (Kohn and Morgenstern), 1907, A., i, 682.

**Methyl methylfructoside** (Irvine and Hynd), 1909, T., 1227.

**Methyl-β-methylhydroxyethylamino*iso*butylcarbinol** (*ethanolmethyldiacetonalkamine*) and its platinichloride (Kohn), 1905, A., i, 929.

**Methyl β-methyloctyl ketone** and its semicarbazone (Bouveault and Locquin), 1905, A., i, 18.

**Methyl-β-methylpropylamino*iso*butylcarbinol** and its additive salts (Kohn and Schlegl), 1907, A., i, 683.

**Methyl α-methylpropyl ketone** and its oxime, phenylhydrazone, and semicarbazone (Courtot), 1906, A., i, 926.

**Methylmorindanol** (Barrowcliff and Tutin), 1907, T., 1918; P., 249.

**Methylmorphimethine,** formula of (Knorr), 1905, A., i, 814.
  new basic products from (Knorr), 1904, A., i, 916.
  methyl ether, salts of (Knorr and Roth), 1911, A., i, 1015.
  chloro- and benzoyl derivatives (Pschorr, Kuhtz, and Roth), 1909, A., i, 878.

**Methylmorphimethine,** chloro-, transformation of, into the quaternary salts of a cyclic base from phenanthrene (Pschorr and Dickhäuser), 1910, A., i, 425.
  hydroxy-. See Ketodihydromethylmorphimethine.

**α-Methylmorphimethine,** transformation of, into the β-compound by heat, and their crystallographic behaviour (Pschorr, Roth, and Tannhäuser), 1906, A., i, 204.

**α-Methylmorphimethine,** bromo-, and its derivatives (Vongerichten and Densdorff), 1907, A., i, 1069.

**ε-Methylmorphimethine** and its derivatives (Knorr and Hörlein), 1907, A., i, 151.
  hydrates of (Pschorr and Dickhäuser), 1912, A., i, 578.

**ζ-Methylmorphimethine** (Knorr, Hörlein, and Grimme), 1907, A., i, 957.

**Methylmorphimethines,** α- and β-, action of bromine on (Vongerichten and Hübner), 1907, A., i, 718.

γ-, δ-, and **ε-Methylmorphimethine methyl ethers** and their hydriodides (Pschorr and Dickhäuser), 1912, A., i, 579.

**Methyl*apo*morphine** and its acetyl and benzoyl derivatives and their salts (Pschorr, Jaeckel, and Fecht), 1903, A., i, 194.

**Methylmorphinium** methosulphite (Gerber), 1911, A., i, 154.

**Methyl*apo*morphinium** salts (Gerber), 1911, A., i, 154.

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**2′Methyl-1-2-naphthacarbazole** (Ullmann, Delétra, and Kogan), 1909, A., i, 776.

**4-Methyl-α-naphthacoumarin,** azo-derivatives of (Hewitt and Mitchell), 1906, T., 17.

**4-Methyl-β-naphthacoumarin,** dibromide, and bromo-, and nitro-derivatives (Bacovescu), 1910, A., i, 406.

**1-Methylnaphthalene,** 2:3-quinone of (Fries and Empson), 1909, A., i, 809.

**1-Methylnaphthalene**, 2:4-*di*amino-, and its **3-carboxylic acid** and its ethyl ester, and their additive salts (Alkinson and Thorpe), 1906, T., 1924; P., 282.
  ωω-2-*tri*chloro- (Sachs and Brigl), 1911, A., i, 720.
  4-chloro-6-bromo-2:3-*di*hydroxy-, and its diacetyl derivative (Fries and Hempelmann), 1909, A., i, 810.
  4-chloro-6-bromo-1:2-*di*nitro-2:2:3:3-*tetra*hydroxy- (Fries and Empson), 1909, A., i, 809.
**2-Methylnaphthalene**, *penta*bromo- (Bodroux and Taboury), 1909, A., i, 707.
**1-Methylnaphthalene-*N*-phthaloylic acid**, 2-amino- (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1912, A., i, 563.
**1-Methylnaphthalene-6-phthaloylic acid**, 2-amino-, and 2-hydroxy- (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1912, A., i, 564.
*N*-**Methyl-β-naphthamorpholine**, and its sulphocamphylate and methiodide (Lees and Shedden), 1903, T., 762; P., 133.
*N*-**Methyl-β-naphthamorpholone**, preparation and electrolytic reduction of (Lees and Shedden), 1903, T., 758; P., 133.
**9-Methyl-αβ-naphthaphenazine** (Noelting, Grandmougin, and Freimann), 1909, A., i, 443.
  and 8-amino-, and its additive salts and *N*-acetyl derivative, 8-amino-2-hydroxy-, and 8-amino-6-hydroxy- (Ullmann and Ankersmit), 1905, A., i, 553.
**11-Methyl-ββ-naphthaphenazine**, 6-chloro-8-bromo- (Fries and Hempelmann), 1909, A., i, 810.
**Methylnaphthaphenazonium** salts, 1:3-*di*amino- (Kehrmann and Riera y Punti), 1911, A., i, 928.
**2-Methyl*iso*naphthaphenazoxonium** salts, 9-amino- (Kehrmann, de Gottrau, and Leemann), 1907, A., i, 555.
**1:2-Methylnaphthaquinitrole** and 6-*mono*- and 3:6-*di*-bromo- (Fries and Hübner), 1906, A., i, 191.
  3-*mono*- and 3:4-*di*-chloro- (Fries and Hempelmann), 1908, A., i, 731.
  4-chloro-6-bromo-3-hydroxy- (Fries and Empson), 1909, A., i, 809.
**1-Methyl-2-naphthaquinol**, 3-*mono*- and 3:4-*di*-chloro-, and their acetates (Fries and Hempelmann), 1908, A., i, 731.
**1-Methyl-2-naphthaquinol**, 3:4-*di*-chloro-, and its methoxy-derivatives (Fries and Hempelmann), 1908, A., i, 730.
**1:2-Methylnaphtha-ψ-quinol** and its oxime (Bargellini and Silvestri), 1907, A., i, 914.
  and 6-*mono*- and 3:6-*di*-bromo-, and their acetyl derivatives, and 6-bromo-3-nitro- (Fries and Hübner), 1906, A., i, 191.
**4-Methyl-1-naphthaquinoline**, 7-amino-2-hydroxy-, and its diacetyl, benzoyl, and benzylidene derivatives (Finger and Spitz), 1909, A., i, 523.
**1-Methyl-2:3-naphthaquinone**, 4-chloro-6-bromo- (Fries and Empson), 1909, A., i, 809.
*N*-**Methylnaphthaquinoxalone** (Fischer and Schindler), 1908, A., i, 222.
**Methylnaphthiminazole** (*ethenyl*di*amino-naphthalene*) (Meldola and Lane), 1905, P., 24.
  and its salts, and its *N*-methyl and *N*-ethyl derivatives and their salts (Meldola, Eyre, and Lane), 1903, T., 1190; P., 205.
  *N*-ethyl derivative, salts of (Meldola and Lane), 1904, T., 1599; P., 214.
  (Prager's) and its *N*-ethyl derivative and their salts (Meldola, Eyre, and Lane), 1903, T., 1196; P., 205.
**Methylnaphthiminazole**, amino-, (*ethenyl*tri*aminonaphthalene*) and its salts and the *N*-ethyl derivative of the acetyl compound and its salts (Meldola, Eyre, and Lane), 1903, T., 1185; P., 205.
  (Markfeldt's), its formation from its isomeride and its salts and derivatives (Meldola, Eyre, and Lane), 1903, T., 1198; P., 205.
**Methylnaphthiminazoles**, amino-, isomeric, replacement of the amino-group in, by bromine (Meldola and Lane), 1904, T., 1597; P., 214.
μ-**Methyl-1:2-naphthiminazole-7-sulphonic acid**, 5-hydroxy- (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 900.
**1-Methyl-β-naphthindole**, preparation and hydrogenation of, and its **sulphonic acid**, sodium salt (Pschorr and Karo), 1906, A., i, 886.
**1-Methyl-β-naphthol** and its picrate and benzoyl derivative, and hydroxy- (Betti and Mundici), 1907, A., i, 322.

**1-Methyl-β-naphthol,** and 6-*mono*- and 3:6-*di*-bromo-, and their ethers and acetyl derivatives, and 6-bromo-3-amino-, and its acetyl derivatives, and 6-bromo-3-nitro- (Fries and Hübner), 1906, A., i, 191.

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**2-Methylnaphth*peri*oxazole,** *tri*bromo-, and its dibromide (Fichter and Gageur), 1906, A., i, 840.

6:7:9-*tri*chloro- (Fichter and Kühnel), 1910, A., i, 107.

**2′- and 4′-Methyl-α-naphthoylbenzoic acids** (Scholl and Tritsch), 1912, A., i, 36.

**Methyl-β-naphthylamine,** ω-cyano- (Bucherer), 1905, A., i, 438.

**1-Methyl-2-naphthylamine** and its acetyl derivative and hydrochloride (Bargellini and Silvestri), 1907, A., i, 915.

and its sulphate and acetyl derivative (Fries and Hübner), 1906, A., i, 191.

**Methylnaphthylazocarbonamide** (Bargellini and Silvestri), 1907, A., i, 915.

**2-Methyl-6:8-naphthylenediamine** and its additive salts and diacetyl derivative and **7-carboxylic acid** and its ethyl ester (Atkinson and Thorpe), 1907, T., 1708 ; P., 216.

**Methyl-5:7-naphthylenediamines,** 1- and 2-, and their additive salts and diacetyl derivatives and **6-carboxylic acids** and their ethyl esters (Atkinson and Thorpe), 1907, T., 1700 ; P., 216.

**5-Methylnaphthylphenylmethane-2′-carboxylic acid,** 6-hydroxy- (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1911, A., i, 563.

**1-Methyl-2-naphthylphthalimide** (Scholl, Neuberger, Tritsch, and Potschiwauscheg), 1912, A., i, 563.

**δ-Methyl-β-2-naphthylthiosemicarbazide** (Busch and Reinhardt), 1910, A., i, 77.

**ω-4′-Methyl-α-naphthyl-*o*-toluic acid** and its ammonium salt and ω-hydroxy-, lactone of (Scholl and Tritsch), 1912, A., i, 36.

**Methylnarceine** and its salts (Tambach and Jaeger), 1906, A., i, 879.

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metho-benzenesulphonate, -nitrate, and -sulphate, and its dimethyl ether, methophosphate of (Knoll & Co.), 1907, A., i, 1070.

**Methylnarcotine** methiodide (Rabe and McMillan), 1911, A., i, 78.

**Methylnarcotinium** salts (Gerber), 1911, A., i, 154.

**Methylnataloe-emodin** and its pentabromide and diacetyl derivative (Léger), 1905, A., i, 532.

**Methylnitroamine,** formation of (van Romburgh and Maurenbrecher), 1907, A., i, 572.

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**1-Methylnitroamino-3:5-dimethoxybenzene,** 2:9-*di*nitro- (Blanksma), 1908, A., i, 979.

**Methylnitroamino-*p*-phenetidine,** 3:5-*di*nitro- (Reverdin and Liebl), 1912, A., i, 440.

**Methyl nitro*iso*butyl ketone** (*nitroisopropylacetone*) (Harries and Ferrari), 1903, A., i, 320.

**Methyl-α-nitro*iso*butyric acid** (Steinkopf and Supan), 1911, A., i, 946.

**Methylnitrolic acid,** bromo- (Ponzio and Charrier), 1907, A., i, 814.

chloro- (Ponzio), 1907, A., i, 744.

cyano- (Steinkopf, Bohrmann, Grünupp, Kirchhoff, Jürgens, and Benedek), 1910, A., i, 306.

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***m*-Methylnitrosoaminobenzoic acid** and its ethyl ester (Houben and Brassert), 1910, A., i, 170.

***p*-Methylnitrosoaminobenzoic acid,** ethyl ester (Houben, Schottmüller, and Brassert), 1909, A., i, 922.

**4-Methylnitrosoamino-3:3′-dimethylphenyl-4′-azo-β-naphthol** (Rassow and Becker), 1911, A., i, 932.

**4-Methylnitrosoamino-3:3′-dimethyldiphenyl-4′-diazonium** chloride (Rassow and Becker), 1911, A., i, 932.

**4-Methylnitrosoaminodiphenyl-4′-azo-*p*-dimethylaniline** and its hydrochloride (Rassow and Berger), 1911, A., i, 821.

**4-Methylnitrosoaminodiphenyl-4′-diazonium** chloride (Rassow and Berger), 1911, A., i, 821.

**Methylnitrosoamino-*o*- and -*p*-phenetidines**, 3:5-*di*nitro- (REVERDIN and LIEBL), 1912, A., i, 440.
**α-Methylnitrosoaminopropionic acid**, β-amino- (TAFEL and FRANKLAND), 1909, A., i, 829.
**6-Methylnitrosoamino-*m*-toluic acid** (HOUBEN, SCHOTTMÜLLER, and FREUND), 1910, A., i, 35.
**Methyl β-nitroso*iso*butyl ketones**, isomeric (HARRIES), 1903, A., i, 461.
**Methylnitrosolic acid** and its metallic salts, and allied compounds (WIELAND and HESS), 1909, A., i, 882.
**Methylnitrosolic acid**, amino-, and its salts and benzoyl derivative (WIELAND), 1905, A., i, 421.
**1-Methyl*dicyclo*-[1,3,3]-nonan-5-ol**, 7-amino-, isomeric (RABE and EHRENSTEIN), 1908, A., i, 553.
**Methyl*dicyclo*-nonanolone** and its acetate, **-nonane-5:7-diol** and its diacetate, and **-nonane** (RABE), 1904, A., i, 509.
  and its oximes and their amines (RABE and JAHR), 1908, A., i, 553.
**α-Methylnonoic acid.** See Decoic acid.
**β-Methyl-nonoic acid**, β-hydroxy-, and **-$\Delta^{\alpha}$-nonenoic acid**, ethyl esters (BOUVEAULT and BLANC), 1905, A., i, 12.
**Methylnonylacetaldehyde** and its semicarbazone (DARZENS), 1907, A., i, 182.
**β-Methylnonyl alcohol** and its acetate (GUERBET), 1903, A., i, 61.
**γ-Methylnonyl alcohol** (BOUVEAULT and BLANC), 1903, A., i, 730; 1905, A., i, 12.
**Methylnonylcarbinol** (*undecyl alcohol*) (THOMS and MANNICH), 1903, A., i, 673; (BLAISE and GUÉRIN), 1904, A., i, 142.
  and its acetate (HOUBEN), 1903, A., i, 48.
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  hydrogen succinate of (PICKARD and KENYON), 1911, T., 59.
***d*-Methyl-*n*-nonylcarbinol** (HALLER and LASSIEUR), 1910, A., i, 808.
  and its hydrogen phthalate and brucine and strychnine salts of the latter (PICKARD and KENYON), 1911, T., 60, 70.
**Methylnonylcarbinolpinacone** (HOUBEN), 1903, A., i, 48.
**Methylnonylglycidic acid**, ethyl ester (DARZENS), 1907, A., i, 178.
**Methyl nonyl ketone** (*βζ-dimethyl-$\Delta^{\alpha}$-nonen-θ-one*) and its oxime and semicarbazone (RUPE, PFEIFFER, and SPLITTGERBER), 1907, A., i, 712.
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**Methyl nonyl ketoxime**, transformation of (HOUBEN), 1903, A., i, 48.
**Methylnopinol.** See Homonopinol.
**4-Methylnorcaradienecarboxylic acid**, ethyl ester, and amide (BUCHNER and FELDMANN), 1904, A., i, 57.
**Methylnorhemipinanil**, 6-nitro-, and its acetyl derivative (WEGSCHEIDER and KLEMENC), 1911, A., i, 542.
**Methylnorhemipin-1-anilic acid**, 6-nitro-, and its salts and methyl ester (WEGSCHEIDER and KLEMENC), 1911, A., i, 541.
**Methylnorhemipin-2-anilic acid**, 6-nitro- (WEGSCHEIDER and KLEMENC), 1911, A., i, 541.
**Methylnorhemipinic acid**, 6-nitro-, dimethyl ester (WEGSCHEIDER and KLEMENC), 1911, A., i, 542.
**Methylnormeconineanilide** and its acetyl derivative (MEYER and TURNAU), 1909, A., i, 710.
**Methylnoroxyberberine** and bromo-, and their acetyl derivatives (FALTIS), 1910, A., i, 699.
***N*-Methylnorpapaverinium** derivatives (DECKER, DUNANT, and GIRARD), 1908, A., i, 205.
**Methylocitric acid.** See Methoxytricarballylic acid.
**η-Methyl-$\Delta^{\beta\delta}$-octadiene** and its dibydrobromide and tetrabromide (REIF), 1908, A., i, 847.
**δ-Methyl-$\Delta^{\gamma\epsilon}$-octadiene** (BJELOUSS), 1912, A., i, 229.
**α-Methyloctaldehyde** and its semicarbazone (SOMMELET), 1907, A., i, 108.
**Methyloctanal** and its copper derivative (COUTURIER), 1910, A., i, 299.
**δ-Methyloctane** (CLARKE), 1912, A., i, 405.
**1-Methyl*dicyclo*-[2,2,2]-octane** and 7-amino-, and its picrate (SEMMLER and BARTELT), 1908, A., i, 38.
**δ-Methyloctan-δ-ol** (CLARKE), 1912, A., i, 405.
**δ-Methyloctan-ε-ol** (BJELOUSS), 1912, A., i, 229.

**1-Methyl*dicyclo*-[2,2,2]-octan-7-ol** and its acetate and chloride (SEMMLER and BARTELT), 1908, A., i, 38.

**δ-Methyl-$\Delta^{\delta}$-octene** (BJELOUSS), 1912, A., i, 230.

**ζ-Methyl-ε-octen-α-inoic acid** and its methyl ester (MOUREU and DELANGE), 1903, A., i, 313.

**δ-Methyl-$\Delta^{\gamma}$-octen-ε-ol** and its salts (BJELOUSS), 1912, A., i, 229.

**ζ-Methyl-α-octinoic acid.** See Noninoic acid.

**α-Methyloctoic acid**, α-amino-, and its nitrile, hydrochloride of (v. GULEWITSCH and WASMUS), 1906, A., i, 410.

*d*-**Methyl-*n*-octylcarbinol** and its hydrogen phthalate and brucine and strychnine salts of the latter (PICKARD and KENYON), 1911, T., 60, 70.

**Methyl octyl diketone** (*acetylnonoyl*) and its derivatives (LOCQUIN), 1905, A., i, 20.

**Methylolacetophenone** and its acetyl derivative (VAN MARLE and TOLLENS), 1903, A., i, 493.

*m*-**Methylolbenzoic acid.** See *m*-Toluic acid, ω-hydroxy-.

**Methylolcarbamide** (EINHORN and HAMBURGER), 1908, A., i, 142.

*p*-**Methylolcinnamic acid** (EINHORN and GÖTTLER), 1910, A., i, 113.

**Methylol compounds** of acid amides (EINHORN, BISCHKOPFF, LADISCH, MAUERMAYER, SCHUPP, SPRÖNGERTS, and SZELINSKI), 1906, A., i, 245; (EINHORN), 1906, A., i, 486; (EINHORN, FEIBELMANN, GÖTTLER, HAMBURGER, and SPRÖNGERTS), 1908, A., i, 608.

**Methyloldimethylacetaldehyde**, action of hydrogen cyanide on (GLASER), 1904, A., i, 284.

**Methylol-γ-dimethylcrotonic acid** and its lactone and dibromide (SILBERSTEIN), 1904, A., i, 288.

**Methyloleanol** and its acetyl derivative (POWER and TUTIN), 1908, T., 899; P., 117.

**Methylolivil** (KOERNER and VANZETTI), 1912, A., i, 352.

**Methyl*iso*olivil** (KOERNER and VANZETTI), 1912, A., i, 353.

**Methylolmethylenebisacetylacetone** (KNOEVENAGEL), 1903, A., i, 638.

*o*-**Methylolphenyldialkylcarbinols**, formation of (LUDWIG), 1907, A., i, 702.

**Methyl-orange** (*helianthin*), isomerism of (HANTZSCH and HILSCHER), 1908, A., i, 469.

**Methyl-orange** (*helianthin*), colour changes of, in acid solution (TIZARD), 1910, T., 2477; P., 225.
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**Methyloxalacetic acid** (ERLENMEYER and ARBENZ), 1905, A., i, 241.

**α-Methyl-α-oxalosuccinic acid**, ethyl ester (BLAISE and GAULT), 1908, A., i, 714.

**5-Methyl*iso*oxazole** and its cadmichloride, mercurichloride, and platinic chloride compound (CLAISEN), 1909, A., i, 185.
  synthesis of (CLAISEN), 1911, A., i, 491.
  and its **3:4-dicarboxylic acid and its** salts and ethyl ester (SCHMIDT and WIDMANN), 1908, A., i, 457.

**3-Methyl*iso*oxazole-4-azobenzene-4-*p*-azosalicylic acid**, 5-hydroxy- (BÜLOW and HAAS), 1911, A., i, 340.

**3-Methyl*iso*oxazole-4-carboxylic acid**, 5-hydroxy-, ethyl ester (PALAZZO), 1906, A., i, 701.

**3-Methyl*iso*oxazoline** (MAIRE), 1908, A., i, 290.

**Methyloxazolone**, oximino-, pyridine, piperidine, and metallic salts of (HANTZSCH and KEMMERICH), 1909, A., i, 336.

**Methyl*iso*oxazolone**, *iso*nitroso- (BOUVEAULT and WAHL), 1905, A., i, 257, 612; (HANTZSCH), 1905, A., i, 408.

**γ-Methyl*iso*oxazolone** and its *C*-methyl derivative (OLIVERI-MANDALÀ and COPPOLA), 1911, A., i, 492.

**δ-Methyloximino-αγ-diketoheptoic acid** and its ethyl ester and sodium salt (DIELS and PLAUT), 1905, A., i, 509.

**1-Methyloxindole-3-aldehyde** and its derivatives (FRIEDLÄNDER and KIELBASINSKI), 1911, A., i, 1022.

*N*-**Methyl*iso*papaverine** and its picrate (DECKER and KLAUSER), 1904, A., i, 338; (DECKER and HOCK), 1904, A., i, 620.
  oxidation of (DECKER and PSCHORR), 1904, A., i, 927.

**Methylparabanic acid**, oxime of (SCHMIDT), 1912, A., i, 540.

**μ-Methylparabanic acid** (O-*methyloxalylisocarbamide*) (Bruce), 1904, A., i, 574.
**γ-Methylparaconic-α-acetic acid** and its ethyl ester (Fichter and Probst), 1910, A., i, 217.
**α-Methylparaconic acid** and its zinc salt and ethyl ester (Fichter and Rudin), 1904, A., i, 472.
**α-Methylparaconic acid**, bromo- (Fittig and Scheen), 1904, A., i, 555.
**Methylparaconyltropeine** and its additive salts (Jowett and Hann), 1906, T., 361; P., 61.
***N*-Methylpavine**, and its salts (Pyman and Reynolds), 1910, T., 1324; P., 180.
**η-Methylpentadecan-ι-one** and its semicarbazone (Guerbet), 1910, A., i, 454.
**Methyl-*n*-pentadecylcarbinol** and its salts (Pickard and Kenyon), 1911, P., 313.
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**δ-Methyl-$\Delta^{\alpha\gamma}$-pentadiene** (Kohn), 1907, A., i, 339; (Kohn and Morgenstern), 1907, A., i, 682, 684; (Kohn and Schlegl), 1907, A., i, 683; (Kijner and Klawikordoff), 1911, A., i, 635.
**γ-Methyl-$\Delta^{\beta\delta}$-pentadiene** (Abelmann), 1910, A., i, 455.
**4-Methyl*cyclo*pentadiene** and its **2-propionic acid** (Duden and Freydag), 1903, A., i, 420.
**β-Methylpentane.** See *iso*Hexane.
**γ-Methylpentane**, αβγδ-*tetra*bromo-, and dihydrobromide (Abelmann), 1910, A., i, 455.
**Methyl*cyclo*pentane**, preparation of (Nametkin), 1912, A., i, 172.
  nitration of (Nametkin), 1912, A., i, 175.
**Methylpentanes**, β- and γ-, and their nitro-derivatives (Poni and Costachescu), 1905, A., i, 109.
**1-Methyl*cyclo*pentane-2-carboxylic acid**, 4-bromo-, ethyl ester (Hope and Perkin), 1911, T., 771.
  5-bromo-, and its ethyl ester, and 1:5- and 4:5-*di*bromo- (Haworth and Perkin), 1908, T., 584.
**1-Methyl*cyclo*pentane-3-carboxylic acid**, 3-amino-, and its copper salt (Zelinsky and Stadnikoff), 1906, A., i, 425.
**γ-Methylpentane-βδ-diol** and its diacetate (Abelmann), 1909, A., i, 547.
**γ-Methyl-βδ-pentanediureide** (de Haan), 1908, A., i, 578.
**Methyl*cyclo*pentanetetrone**, attempts to prepare (Diels and Böcking), 1909, A., i, 395.
**γ-Methylpentane-βγδ-triol** and its triacetyl derivative (Abelmann), 1910, A., i, 454.
**1-Methyl*cyclo*pentane-2:4:5-trione** and its oxime, methyl ether, benzylidene and quinoxaline derivatives, and 3-glyoxylic acid and its ethyl ester (Diels, Sielisch, and Müller), 1906, A., i, 438.
  furfurylidene derivative, and 3-oximino-, and its oxime and dimethylaniline derivative, and *di*chloro- (Diels and Böcking), 1909, A., i, 395.
**1-Methyl*cyclo*pentan-2-ol-5-carboxylic acid** (Haworth and Perkin), 1908, T., 584.
**1-Methyl*cyclo*pentan-4-ol-2-carboxylic acid** and its ethyl ester (Hope and Perkin), 1911, T., 770.
**β-Methylpentan-β-ol-γ-one** (Gauthier), 1911, A., i, 513.
**β-Methylpentan-δ-ol-β-one** (*diacetone alcohol*), preparation of (Hoffman), 1911, A., i, 415.
  aminolactones from (Kohn), 1908, A., i, 819; (Kohn and Bum), 1910, A., i, 136.
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  oxime of, and its reduction (Kohn and Lindauer), 1903, A., i, 73.
**γ-Methylpentan-β-ol-δ-one.** See γ-Keto-αβ-dimethylbutyl alcohol.
**γ-Methylpentan-γ-ol-δ-one** (Gauthier), 1911, A., i, 513.
  and its derivatives (Diels and Johlin), 1911, A., i, 254.
**α-Methylpentan-δ-one.** See Hexan-β-one.
**1-Methyl*cyclo*pentan-2-one** and its oxime and semicarbazone (Wallach and Collmann), 1904, A., i, 752.
  preparation of (Best and Thorpe), 1909, T., 703; P., 93.
**1-Methyl*cyclo*pentan-2-one**, 2-cyano-, and its semicarbazone (Best and Thorpe), 1909, T., 711; P., 93.
**1-Methyl*cyclo*pentan-3-one** and its oximes (Wallach and Kempe), 1904, A., i, 755.
  catalytic reduction of (Zelinsky), 1911, A., i, 988.
**Methyl*cyclo*pentan-4-one-3-acetic acid** and its methyl ester, and their semicarbazones (Blanc), 1908, A., i, 21.

**Methyl*cyclo*pentanonecarboxylic acid** and its isomeride, and their salts, ethyl ester and oximes (Svoboda), 1903, A., i, 174; (Michael), 1903, A., i, 348.

**1-Methyl*cyclo*pentan-2-one-1-carboxylic acid**, ethyl ester (Prjewalsky), 1903, A., i, 728.
  methyl ester, and its semicarbazone (Bouveault and Locquin), 1908, A., i, 172.

**1-Methyl*cyclo*pentan-2-one-3-carboxylic acid**, esters, and their semicarbazones (Bouveault and Locquin), 1908, A., i, 172.

**1-Methyl*cyclo*pentan-2-one-3-carboxylic acid**, 1-cyano-, ethyl ester (Best and Thorpe), 1909, T., 702; P., 93.

**1-Methyl*cyclo*pentan-2-one-4-carboxylic acid**, and its ethyl ester and derivatives (Hope and Perkin), 1911, T., 774.

**1-Methyl*cyclo*pentan-2-one-5-carboxylic acid** and its ethyl ester, oxime, and semicarbazone, synthesis of (Haworth and Perkin), 1908, T., 579.

**1-Meth*cyclo*pentan-3-one-2-carboxylic acid**, 2-cyano-, ethyl ester (Noyes and Cox), 1904, A., i, 10.

**1-Methyl*cyclo*pentan-3-one-4-carboxylic acid**, esters, rotation of (Haller and Desfontaines), 1905, A., ii, 429.

**1-Methyl*cyclo*pentan-4-one-2-carboxylic acid** and its ethyl ester and derivatives (Hope and Perkin), 1911, T., 769.

**Methyl*cyclo*pentan-4-one-3-carboxylic acid**, methyl ester, and the reaction of the sodium derivative with ethyl bromoacetate (Blanc), 1908, A., i, 20.

**1-Methyl*cyclo*pentan-2-one-1:5-dicarboxylic acid**, ethyl ester, and its hydrolysis (Haworth and Perkin), 1908, T., 579.

**1-Methyl*cyclo*pentan-2-one-3-dicarboxylic acid**, ethyl ester (Hope and Perkin), 1911, T., 774.

**1-Methyl*cyclo*pentan-2-one-3:5-dicarboxylic acid**, ethyl ester (Haworth and Perkin), 1908, T., 582.

**1-Methyl*cyclo*pentan-4-one-2:3- or -2:5-dicarboxylic acid**, ethyl ester, and its semicarbazone (Hope and Perkin), 1911, T., 768.

**1-Methyl*cyclo*pentan-3-one-4-oxalic acid**, ethyl ester (Ruhemann), 1912, T., 1733.

**1-Methyl*cyclo*pentan-3-one-1:5:5-tricarboxylic acid**, ethyl ester (Svoboda), 1903, A., i, 174; (Michael), 1903, A., i, 348.

**β-Methyl-α-pentanonoic acid.** See Methylethylpyruvic acid.

**1-Methyl-$\Delta^1$-*cyclo*pentene-2-carboxylic acid** (Wallach), 1912, A., i, 878.

**1-Methyl-$\Delta^4$- and -$\Delta^5$-*cyclo*pentene-2-carboxylic acid**, formation and separation of, and oxidation of, and their ethyl esters (Haworth and Perkin), 1908, T., 585.
  ethyl esters, action of magnesium methyl iodide on (Haworth and Perkin), 1908, T., 593.

**Methylpentenedicarboxylic acid** and its ethyl ester (Vorländer, Weissheimer, and Sponnagel), 1906, A., i, 366.

**δ-Methyl-$\Delta^\gamma$-pentene-$\Delta^\alpha$-inoic acid** (Moureu and Delange), 1903, A., i, 313.

**1-Methyl-$\Delta^3$-4-*cyclo*pentene methyl ketone** and its semicarbazone (Harding, Haworth, and Perkin), 1908, T., 1969.

**α-Methyl-$\Delta^\beta$-pentenoic acid** and its calcium salt (Fichter and Rudin), 1904, A., i, 473.

**γ-Methyl-$\Delta^\gamma$-pentenoic acid** (*γ-methylallylacetic acid*) and its ethyl ester (Jones and Tattersall), T., 1693; P., 218.

**β-Methyl-$\Delta^\alpha$ and -$\Delta^\beta$-pentenoic acids** (Fichter and Gisiger), 1910, A., i, 88.

**γ-Methyl-$\Delta^\beta$-penten-δ-ol** and its chloride and acetate (Abelmann), 1910, A., i, 454.

**γ-Methyl-$\Delta^\gamma$-penten-β-ol** and its acetate (Abelmann), 1908, A., i, 2.

**δ-Methyl-$\Delta^\gamma$-penten-β-ol** (Courtot), 1906, A., i, 789.

**α-Methylpentenolactone** and its salts and phenylhydrazone (Fittig and Kraus), 1907, A., i, 473.

**Methyl*cyclo*pentenolone** and its salts and derivatives (Meyerfeld), 1912, A., i, 628.

*ac*-**Methylpentenylbenzene** and its dibromide (Klages and Sautter), 1904, A., i, 302.

**γ-Methyl-α-pentinoic acid.** See Hexinoic acid.

**Methylpentosan**, estimation of (Mayer), 1907, A., ii, 586.
  estimation of, in presence of pentosans (Ellett and Tollens), 1905, A., ii, 210.

**Methylpentosans** and pentosans, in seeds (Borghesani), 1910, A., ii, 532.
  estimation of, in cereals and in wood fungi (Ishida and Tollens), 1911, A., ii, 645.

**Methylpentoses**, detection of, in presence of pentoses (Rosenthaler), 1909, A., ii, 353.

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α- and β-**Methyl pentosides**, action of nucleosidase on (Levene, Jacobs, and Medigreceanu), 1912, A., ii, 577.

2-**Methylperimidine**, salts of (Sachs), 1909, A., i, 427.

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9-hydroxy-, hydrochloride (Kehrmann and Engelke), 1909, A., i, 151.

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**Methylphæophorbides** (Willstätter and Stoll), 1912, A., i, 286.

*p*-**Methylphenacyldialuric acid** and its sodium salt and acetyl and benzoyl derivatives (Kühling and Schneider), 1909, A., i, 424.

*p*-**Methylphenacyl*iso*hydantoic acid** (Kühling and Schneider), 1909, A., i, 424.

*p*-**Methylphenacyltartronuric acid** and its lead salt (Kühling and Schneider), 1909, A., i, 424.

ψ-2- and -3-**Methylphenanthraphenazoxines** (Kehrmann and Winkelmann), 1907, A., i, 346.

1-**Methyl-phenanthrene** and -**phenanthraquinone** (Pschorr and Hofmann), 1906, A., i, 849.

2-**Methylphenanthrene**, and 4-hydroxy-, and its acetyl derivative (Behrend and Klinckhard), 1911, A., i, 294.

3-**Methylphenanthrene** and its dibromide (Pschorr and Quade), 1906, A., i, 849.

6-**Methylphenanthrene-9-carboxylic acid** (Pschorr and Quade), 1906, A., i, 849.

8-**Methylphenanthrene-9-carboxylic acid** (Pschorr and Hofmann), 1906, A., i, 849.

4-**Methyl-ψ-phenanthrol-3-one** and its derivatives (Kaufmann, Radošević, Hüssy, and Damje), 1909, A., i, 608.

*N*-**Methylphenazothionium** platinichloride and *di*nitro-, hydrate of (Barnett and Smiles), 1910, T., 189.

*S*-**Methylphenazothionium** hydroxide, hydrochloride and platinichloride (Barnett and Smiles), 1910, T., 986.

**Methyl-*p*-phenetidine**, 3:5-*di*nitro- (Reverdin and Liebl), 1912, A., i, 440.

2-**Methyl*iso*pheno-1:3:4-diazosulphonine** (Ekbom), 1903, A., i, 411.

*N*-**Methylphenomorpholine** (Lees and Shedden), 1903, T., 757; P., 132.

*N*-**Methylphenomorpholone**, electrolytic reduction of (Lees and Shedden), 1903, T., 756; P., 132.

12-**Methyl-1:2-phenonaphthacridol** (Ullmann and La Torre), 1904, A., i, 930.

2-**Methyl-1:2-phenonaphthacarbazole-*N*-sulphonic acid**, sodium salt (Bucherer and Seyde), 1908, A., i, 455.

μ-**Methylphenopentoxazole.** See 3-Methyl-2:4-benzoxazine.

3-**Methylphenothioxin** (Aktien-Gesellschaft für Anilin-Fabrikation), 1911, A., i, 903.

5-**Methylphenoxazine**, 3-nitro- (Ullmann and Sané), 1912, A., i, 104.

α-4-**Methylphenoxypropionic acid**, α-2-cyano- (Auwers), 1912, A., i, 1011.

1-**Methylphenylene-4:5-dithiol**, 2-amino-. See Toluene, 2-amino-4:5-dithiol-.

**Methyl β-phenylthiol-γ-benzylidenepropyl ketone** (Ruhemann), 1905, T., 465.

**Methylphloroglucinol**, bromo-, and its carboxylic acid (Schreier and Wenzel), 1904, A., i, 518.

*tri*thio-, and its derivatives (Pollak and Tucaković), 1910, A., i, 734.

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**Methylphloroglucinoldiazobenzene** (Boehm), 1904, A., i, 404.

**Methylphloroglucinyl-*n*-butanone** and its azo-compound (Boehm), 1904, A., i, 407.

**Methylphosphinic acid**, hydroxy-, and its salts (Page), 1912, T., 428; P., 39.

3-**Methylphthalic acid** (Jürgens), 1907, A., i, 1036.

4-**Methylphthalic acid**, preparation of, isoquinoline derivatives from (Findeklee), 1906, A., i, 42.

1-**Methylphthalide** (Simonis, Marben, and Mermod), 1906, A., i, 32.

1-**Methylphthalide**, 4-bromo- (Fries and Hempelmann), 1909, A., i, 810.

*tetra*bromo- (Gabriel), 1907, A., i, 216.

1-**Methylphthalide-1-carboxylic acid**, 4-bromo- (Fries and Hempelmann), 1909, A., i, 810.

**Methylphthalimidine** hydroper-bromide and -iodide (Werner), 1903, A., i, 235.

**4-Methylphthaliminoglycine** and its salts and ester (Findeklee), 1906, A., i, 42.

**Methyl ζ-phthaliminohexyl ketone** (Gabriel), 1909, A., i, 891.

**Methyl γ-phthaliminopropyl** sulphide (Schneider), 1910, A., i, 659.

**Methylphthalonamic acid** (Findeklee), 1906, A., i, 43.

**Methylphthalonic acid** (Findeklee), 1906, A., i, 43.

**7-Methylphthalonimide** (Findeklee), 1906, A., i, 43.

**10-Methylphthaloperine,** 10-hydroxy-, and its hydriodide and picrate (Sachs), 1909, A., i, 429.

**3-Methylphthalylglycine** and its methyl and ethyl esters (Jürgens), 1907, A., i, 1036.

**Methylpicolide** (Scholtz), 1912, A., i, 386.

**4-Methylpicolyl-*p*-tolylalkine.** See 4:4′-Dimethyldihydrostilbazole, β-hydroxy-.

**Methylpicraconitine** and its hydrobromide and hydrochloride (Schulze), 1906, A., i, 599.

**Methylpicramic acid** (Borsche and Heyde), 1907, A., i, 31.

**Methylpinoneoxime** and its benzoyl derivative and methyl ether (Tilden and Stokes), 1905, T., 837; P., 183.

**1-Methylpiperidine** (Haase and Wolffenstein), 1904, A., i, 856.

**2-Methylpiperidine** (*α-pipecoline*) and water, mutual solubility of (Flaschner and MacEwen), 1908, T., 1000; P., 119.
  preparation of aliphatic halogen compounds from (v. Braun and Sobecki), 1911, A., i, 413.

**3-Methylpiperidine** (*β-pipecoline*), synthesis of (Franke and Kohn), 1903, A., i, 153.
  hydrogen tartrates, *r*-, *d*-, and *l*- (Ladenburg and Bobertag), 1903, A., i, 575.

**Methylpiperidinedicarboxylic acid** and its hydrochloride, aurichloride and copper salt (Schmidt), 1909, A., i, 173.

**Methylpiperidiniumacetic acid,** chloro-, and its ethyl ester and platinichloride (v. Braun), 1908, A., i, 608.

**Methylpiperidobetaine,** and its aurichloride (Klages and Margolinsky), 1904, A., i, 146.

**1-Methyl-6-piperidone,** 3-hydroxy-, and β-naphthalenesulphonamino-compound (Leuchs and Splettstösser), 1907, A., i, 177.

**4-Methyl-2-piperidone-6-carboxylic acid** and its salts (Dieckmann), 1905, A., i, 418.

**2-Methylpiperidyl-6-acetic acid,** and its derivatives (Löffler and Remmler), 1910, A., i, 634.

**Methylpiperonyl ether** (Mameli), 1904, A., i, 668, 743.

**1-Methyl-3-piperyl methyl ketone.** See 3-Acetyl-1-methylpiperidine.

***N*-Methylproline.** See Hygric acid.

**Methylpropane.** See Butane.

**Methyl*cyclo*propane,** ω-iodo-, behaviour of, towards alkali hydroxides (Demjanoff), 1903, A., i, 807.

**1-Methyl*cyclo*propane-2:3-dicarboxylic acid,** 2:3-*di*bromo-, methyl and ethyl esters (Jones), 1905, T., 1064; P., 216.

**1-Methyl*cyclo*propane-2:3-di- and -2:3:3-tri-carboxylic acids** (Preisweck), 1903, A., i, 459.

**1-Methyl*cyclo*propane-2:3-di- and -2:2:3:3-tetra-carboxylic acids** and their ethyl esters (Kötz and Stalmann), 1903, A., i, 741.

**3-Methyl*cyclo*propane-1:1:2:2-tetracarboxylic acid,** *tri*chloro-, ethyl ester (Kötz), 1907, A., i, 707.

**1-Methyl-$\Delta^2$-*cyclo*propene-2:3-dicarboxylic acid** (Perkin), 1903, T., 846.
  methyl and ethyl esters, bromination of (Jones), 1905, T., 1062; P., 216.

**1-Methyl-2-*iso*propenol*cyclo*pentane,** 5-hydroxy- (Haworth and Perkin), 1908, T., 594.

**1-Methyl-3-*iso*propenol*cyclo*pentane,** 1-hydroxy- (Haworth and Perkin), 1908, T., 593.

**1-Methyl-2-*iso*propenol-$\Delta^5$-*cyclo*pentene** (Haworth and Perkin), 1908, T., 597.

**1-Methyl-2-*iso*-propenol- and -propenyl-$\Delta^4$-*cyclo*pentenes** (Haworth and Perkin), 1908, T., 593.

**1-Methyl-3-*iso*-propenol- and -propenyl-*cyclo*pentenes** (Haworth and Perkin), 1908, T., 592.

*p*-α-**Methyl-propenyl- and -propyl-anisoles** (Klages), 1904, A., i, 1004.

**β-Methyl-$\Delta^{\alpha}$-propenylbenzene** (Klages and Haen), 1904, A., i, 497.

*o*-**Methyl*iso*propenylbenzene** (Kay and Perkin), 1905, T., 1071.

*m*-**Methyl*iso*propenylbenzene** (Perkin and Tattersall), 1905, T., 1090.

*p*-**Methyl*iso*propenylbenzene** and its dibromo-derivative and nitrosochloride (Perkin and Pickles), 1905, T., 653.

**Methylpropenylcarbinol** and its acetate and phenylcarbamate (Courtot), 1906, A., i, 926.

**2-Methyl-5-*iso*propenylhexahydro*iso*phthalic acid** (Lapworth), 1906, T., 1825; P., 285.

**1-Methyl-4-*iso*propenyl*cyclo*hexan-2-one-**, 6-cyano-. See Dihydrocarvone, cyano-.

**9-Methyl-3-*iso*propenyl*dicyclo*nonane-5-ol-7-one** and its acetate (Rabe), 1903, A., i, 268; (Rabe and Weilinger), 1903, A., i, 268, 269.

**1-Methyl-2-*iso*propenyl*cyclo*pentane** (Kijner), 1912, A., i, 758.

**2-Methyl-5-*iso*propenyl-$\Delta^2$-tetrahydro*iso*phthalic acid** and its reduction (Lapworth), 1906, T., 1823; P., 285.

**α-Methylpropionic acid.** See Butyric acid.

**3-Methylpropiophenone,** 6-hydroxy- (Auwers), 1904, A., i, 66.

**Methylpropylacetoacetamide** (Meyer), 1907, A., i, 298.

**β-Methyl-β-propylacrylic acid** (Gardner and Haworth), 1909, T., 1963.

**β-Methyl-β-propylacrylonitrile** (Gardner and Haworth), 1909, T., 1963.

**α-Methyl-δ-*iso*propyladipic acid** (*octanedicarboxylic acid*), and its esters, chloride and amides (Martine), 1903, A., i, 315.

and its ethyl esters (Bouveault and Locquin), 1908, A., i, 173.

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**α-Methyl-δ-*iso*propyladipic acid,** α-hydroxy- (Schimmel & Co.), 1910, A., i, 758.

αδ-*di*hydroxy-, synthesis of (Wallach and Meister), 1908, A., i, 812.

**1-Methyl-4-*iso*propyl-3-allylbenzene** (Kunckell), 1903, A., i, 617.

**1-Methyl-4-*iso*propyl-3-allyl*cyclo*hexan-3-ol** (Ryschenko), 1910, A., i, 181.

oxidation and halogen derivatives of (Saytzeff), 1911, A., i, 474.

**1-Methyl-5-propyl-3-allyl-$\Delta^1$-*cyclo*hexen-3-ol** (Matschurevitsch), 1911, A., i, 962.

**1-Methyl-5-*iso*propyl-3-allyl-$\Delta^1$-*cyclo*hexen-3-ol** (Matschurevitsch), 1911, A., i, 962.

**Methylpropylaniline,** 2:4-*di*nitro-, synthesis of (Mulder), 1906, A., i, 491.

**Methyl*iso*propylaniline,** preparation of (Thomas and Jones), 1906, T., 287.

*N*-**Methyl-*n*- and -*iso*-propylanilines,** *p*-bromo-, and their additive salts (Hill), 1907, A., i, 692.

*N*-**Methyl-*p*-*iso*propylaniline-*N*-carboxylamide** (Sachs and Weigert), 1907, A., i, 1046.

**3-Methyl-6-*iso*propylazobenzene,** 4:2′:4′-*tri*nitro- (Borsche), 1908, A., i, 68.

*p*-**Methyl*iso*propylbenzene,** *di*chloro- (Auwers and Hessenland), 1907, A., i, 401.

**Methyl*iso*propylbenzylamine,** 3-hydroxy-, *N*-acyl derivatives of (Einhorn, Bischkopff, Szelinski, Schupp, and Mauermayer), 1906, A., i, 246.

**2-Methyl-5-*iso*propylbenzylidenerhodanic acid,** 4-hydroxy- (Bargellini), 1906, A., i, 536.

**1-Methyl-4-*iso*propyl-3-αβ-*di*bromopropylbenzene** (Kunckell and Dettmar), 1912, A., i, 432.

**β-Methyl-α-propyl-$\Delta^{\beta}$-butenoic acid,** γ-cyano-, and its dibromide (Guareschi), 1907, A., i, 1004.

**β-Methylpropyl *iso*butyl ether,** αβ-*di*chloro- (Henry), 1907, A., i, 670.

**Methyl*iso*propylcarbazole** (Lux), 1910, A., i, 745.

**4-Methyl-1-*iso*propylcarbazole** and its picrate (Borsche, Witte, and Bothe), 1908, A., i, 367.

**3-Methyl-6-*iso*propyl-$\Delta^{N}$-carbazolenine** and its additive salts (Plancher and Carrasco), 1904, A., i, 777.

**Methyl-*n*-propylcarbinol** (Henry), 1907, A., i, 887.

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**Methyl-*n*-propylcarbinol,** *aci*-*di*nitro-, and its potassium salt (Duden and Ponndorf), 1905, A., i, 558.

*d*-**Methyl-*n*-propylcarbinol** and its hydrogen phthalate and brucine and strychnine salts of the latter (Pickard and Kenyon), 1911, T., 60, 65.

**Methyl*iso*propylcarbinol,** rotation of (Pickard and Kenyon), 1911, P., 324.

*d*- and *l*-**Methyl*iso*propylcarbinols** and their derivatives (Pickard and Kenyon), 1912, T., 630.

**α-Methylpropyl α-cyanopropyl ether,** α-hydroxy- (Ultée), 1909, A., i, 705.

**Methylpropyldiacetonalkamine.** See Methyl-β-methylpropylamino*iso*butylcarbinol.

**α′-Methyl-α-*iso*propyldiglycollic acid,** ethyl ester (Jungfleisch and Godchot), 1908, A., i, 128.

**10-Methyl-9-*iso*propyldihydroacridine** (Freund and Bode), 1909, A., i, 515.

**2-Methyl-3-*iso*propyl-1:4-dihydroquinoxaline** and its additive salts and dinitroso- and dibenzoyl derivatives (Ekeley and Wells), 1905, A., i, 613.
**Methyl*iso*propyldiphenamic acids** (Lux), 1910, A., i, 239.
**Methyl*iso*propyldiphenic acid**, diamide, nitrile, nitrile chloride, and nitrile-amide (Lux), 1910, A., i, 239.
  mononitrile of (Werner and Piguet), 1905, A., i, 68.
**Methyl*iso*propyldiphenimide** (Lux), 1910, A., i, 239.
**3′-Methyl-4-*iso*propyldiphenyl**, 2:2′-*di*amino-, and its derivatives (Lux), 1910, A., i, 745.
**Methyl*iso*propyldiphenyl-2-carboxylic acid** and its silver salt (Lux), 1908, A., i, 874.
**β-Methyl-α-propylene α-chlorohydrin** (Fourneau and Tiffeneau), 1907, A., i, 818.
**3-Methyl-4-*iso*propylenepyrazolone** (Wolff), 1905, A., i, 840.
**α-Methylpropyl ethyl ketone**, β-hydroxy- (Blaise and Herman), 1910, A., i, 535.
**Methyl-*n*-propylglutaconimide** and its ammonium derivative (Guareschi), 1905, A., i, 822.
**α-Methyl-γ-*n*-propylglutaric acid**, αγ-*di*hydroxy-, derivatives of (Fittig and v. Panayeff), 1907, A., i, 473.
**α-Methyl-β-*iso*propylglutaric acid** (Noyes and Doughty), 1905, A., i, 321.
**β-Methyl-β-propylglycidic acid**, ethyl ester (Claisen), 1905, A., i, 288.
**1-Methyl-4-*iso*propyl*cyclo*hexadien-3-one**, 6-chloro-2:5:6-*tri*nitro- (Robertson and Briscoe), 1912, T., 1970.
**2-Methyl-5-*iso*propylhexahydrocarbazole** and its nitroso- and carbamyl derivatives (Borsche, Witte, and Bothe), 1908, A., i, 367.
**4-Methyl-7-*iso*propylhexamethyleneimine** and its additive salts (Wallach and Jäger), 1903, A., i, 104.
**1-Methyl-3-propyl*cyclo*hexane** (Mailhe and Murat), 1911, A., i, 126.
**1-Methyl-4-*iso*propyl*cyclo*hexane** (*hexahydrocymene*: p-*menthane*), synthesis of (Smirnoff), 1910, A., i, 104.
  and its 8-bromo-derivative (Perkin and Pickles), 1905, T., 639; P., 130.
**1-Methyl-4-*iso*propyl*cyclo*hexane**, 1:3-*di*amino-. See Tetrahydroumbellulylamine, amino-.
**β-Methyl-γ-propylhexane-βγ-diol** (Parry), 1911, T., 1171; P., 141.
**1-Methyl-2-propyl*cyclo*hexan-2-ol**, and its acetyl derivative (Murat,) 1909, A., i, 147.
**1-Methyl-3-propyl*cyclo*hexan-3-ol**, derivatives of (Mailhe and Murat), 1911, A., i, 126.
**1-Methyl-5-*iso*propyl*cyclo*hexan-2-ol** (Wallach and Virck), 1911, A., i, 313.
**1-Methyl-2-*iso*propyl*cyclo*hexan-5-one** and its oxime and benzylidene derivative (Kötz and Auger), 1911, A., i, 310.
**1-Methyl-5-*iso*propyl*cyclo*hexan-2-one** (Wallach and Virck), 1911, A., i, 313.
**1-Methyl-4-*iso*propyl*cyclo*hexan-3-one-4-carboxylic acid**, ethyl ester, and its semicarbazone (Kötz and Hesse), 1906, A., i, 88.
**3-Methyl-1-*iso*propyl*cyclo*hexan-2- and -6-one-1-carboxylic acids**, ethyl esters, and their semicarbazones (Kötz and Michels), 1906, A., i, 666.
**1-Methyl-3-*iso*propyl-2-*cyclo*hexanone-1:3-dicarboxylic acid**, ethyl ester (Kötz and Michels), 1907, A., i, 58.
**1-Methyl-3-propyl*cyclo*hexene** and its nitrosochloride (Mailhe and Murat), 1911, A., i, 126.
**1-Methyl-4-*iso*propyl-$\Delta^{2\,(\text{or }3)}$-*cyclo*hexen-3-ol**, acetate of (Mannich and Hâncu), 1908, A., i, 276.
**1-Methyl-5-propyl-$\Delta^{1}$-*cyclo*hexen-3-one** (Matschurevitsch), 1911, A., i, 962.
**1-Methyl-3- and -4-propylidene*cyclo*hexanes** and their nitrosochlorides and nitrolpiperidides (Wallach and Rentschler), 1908, A., i, 405.
**1-Methyl-2-*iso*propylidene*cyclo*pentane** (Kijner), 1912, A., i, 758.
**3-Methyl-2-*iso*propylindole** and its picrate (Plancher and Bonavia), 1903, A., i, 434.
**Methyl propyl ketone** and its semicarbazone (Bouveault and Bongert), 1903, A., i, 142.
  formation of, from α-ethylbutyric acid in the organism (Blum and Koppel), 1912, A., ii, 188.
  condensation of cuminaldehyde with (Warunis and Lekos), 1910, A., i, 269.
  phosphorus acid derivatives of (Marie), 1903, A., i, 379.
  semicarbazone, oximino-, and its acetyl derivative (Rupe and Kessler), 1910, A., i, 94.
**Methyl propyl ketone**, γ-amino-, benzoyl derivative (Gabriel), 1909, A., i, 491.
  *tetra*bromo-, and lactone derived from (Pastureau), 1909, A., i, 207.

**Methyl propyl ketone,** chloro-, and its semicarbazone (BLAISE), 1912, A., i, 606.

*iso*nitroso-, semicarbazone of (PONZIO), 1904, A., i, 723.

α-*iso*nitroso-, methyl ether of (DIELS and PLAUT), 1905, A., i, 509.

**Methyl *iso*propyl ketone,** reduction of (BEAUME), 1903, A., i, 727.

action of potassium hydroxide on a mixture of, with phenylacetylene (BORK), 1905, A., i, 774.

α-naphthylhydrazone (ZANGERLE), 1910, A., i, 430.

*p*-tolylhydrazone (KONSCHEGG), 1905, A., i, 924.

constitution of the indoline base from (KONSCHEGG), 1906, A., i, 452.

chlorohydroxy-derivative, and its acetyl and phenylosazone compounds and *di*chloro- (SMIRNOFF), 1905, A., i, 172.

**Methyl propyl ketone ammonia** (THOMAE and LEHR), 1907, A., i, 113.

**Methyl-*n*- and -*iso*-propylmaleic acids,** salts and anhydrides of (KÜSTER and HAAS), 1906, A., i, 693.

**α-Methyl-β-propylmaleic anhydride** and its barium salt (KÜSTER and HAAS), 1904, A., i, 647.

**Methyl*iso*propylmaleimide** and its isomeride (KÜSTER and HAAS), 1904, A., i, 648.

**Methylpropylmaleimides,** *n*- and *iso*- (KÜSTER and HAAS), 1906, A., i, 694.

**Methylpropylmalonic acid,** esters and amide of (MEYER), 1907, A., i, 179.

**Methylpropylmalonic acid,** *di*chloro-, ethyl ester (KÖTZ and ZÖRNIG), 1907, A., i, 112.

**Methylpropyl*iso*oxazole** (BOUVEAULT and BONGERT), 1903, A., i, 142.

**1-Methyl-2-*iso*propyl*cyclo*pentane** (KIJNER), 1912, A., i, 758.

**1-Methyl-3-*iso*propyl*cyclo*pentane.** See Dihydropulegene.

**Methyl*iso*propyl*cyclo*pentanes,** synthesis of terpins, terpineols, and terpenes from (HAWORTH and PERKIN), 1908, T., 573; P., 64.

**1-Methyl-3-*iso*propyl*cyclo*pentan-1-ol-** (WALLACH and OLDENBERG), 1911, A., i, 311.

**i-1-Methyl-3-*iso*propyl*cyclo*pentan-1-ol** (WALLACH and CHALLENGER), 1912, A., i, 263.

**Methyl*iso*propyl-3-*cyclo*pentanolcarboxylic acids** (?) stereoisomeric, and their ethyl esters (MERLING, WELDE, EICHWEDE, and SKITA), 1909, A., i, 483.

**1-Methyl-3-*iso*propyl*cyclo*pentan-2-one** (*dihydrocamphorphorone: dihydropulegenone*) (SEMMLER and MCKENZIE), 1906, A., i, 374.

and its semicarbazone and **1-carboxylic acid,** ethyl ester, synthesis of (KÖTZ and SCHÜLER), 1907, A., i, 59.

and its constitution, and its oxime and semicarbazone (WALLACH, COLLMANN, and THEDE), 1903, A., i, 568.

and its oxime, semicarbazone, and **3-carboxylic acid** (BOUVEAULT and LOCQUIN), 1908, A., i, 173.

**1-Methyl-3-*iso*propyl*cyclo*pentan-2-one-1-carboxylic acid,** ethyl ester (BOUVEAULT and LOCQUIN), 1908, A., i, 173.

**1-Methyl-3-*iso*propyl-$\Delta^1$-*cyclo*pentene** ("*anhydrocamphoryl alcohol*") (SEMMLER), 1904, A., i, 261.

**1-Methyl-3-*iso*propyl-$\Delta^5$-*cyclo*pentene** and its derivatives (WALLACH), 1911, A., i, 310.

**1-Methyl-3-*iso*propyl*cyclo*pentylmethylamine** and its derivatives (WALLACH and OLDENBERG), 1911, A., i, 311.

**Methylpropylphenol** (HENDERSON and BOYD), 1910, T., 1669.

**3-Methyl-6-*iso*propylphenyl α-bromopropyl ketone** (KUNCKELL), 1912, A., i, 433.

**α-3-Methyl-6-*iso*propylphenyl-$\Delta^\alpha$-butylene,** and its dibromide and α-chloro-β-bromo- (KUNCKELL), 1912, A., i, 433.

**δ-Methyl-α-*iso*propylpimelic acid** and its ethyl ester and silver salt (KÖTZ), 1908, A., i, 24.

**Methylpropyl*cyclo*propane** (ZELINSKY and PRSCHEVALSKY), 1908, A., i, 845.

**β-Methyl-α-propyl-$\Delta^\alpha$-propenylbenzene** and its dibromide (KLAGES and HAEN), 1904, A., i, 497.

**3-Methyl-5-propylpyrazole** and its benzoyl derivative and carboxylamide (BOUVEAULT and BONGERT), 1903, A., i, 142, 144.

**3-Methyl-5-propylpyrazole-4-carboxylic acid** and its methyl ester (BOUVEAULT and BONGERT), 1903, A., i, 144.

**4-Methyl-3-propylpyrazolone** (BOUVEAULT and BONGERT), 1903, A., i, 145.

**2-Methyl-5-propylpyridine-3-carboxylic acid,** 6-hydroxy-, and its ethyl ester (ERRERA and LABATE), 1904, A., i, 190.

**2-Methyl-5-*iso*propylpyrrole** and its mercury compound (TSCHUGAEFF and SCHLOESINGER), 1905, A., i, 231.

- **1-Methyl-2-propylpyrrolidine,** and its derivatives (Löffler and Freytag), 1910, A., i, 632.
- **2-Methyl-3-*n*-propyl-4-quinazolone,** 6-, and 7-amino-, acetyl derivatives (Bogert, Amend, and Chambers), 1910, A., i, 895.
- **α-Methyl-β-propylsuccinic acid** and its salts and imide (Tschugaeff and Schloesinger), 1905, A., i, 231.
- **Methyl-*n*- and -*iso*-propylsuccinic acids** (Küster and Haas), 1906, A., i, 694.
- **4-Methyl-1-*iso*propyltetrahydrocarbazole** and its picrate (Plancher and Carrasco), 1904, A., i, 777.
- **2-Methyl-5-*iso*propyl-$\Delta^{1(6)}$-tetrahydrocarbazole** (Borsche, Witte, and Bothe), 1908, A., i, 366.
- **Methyl*iso*propyltriphenylacetic acids,** 2:5- and 5:2-, 4-hydroxy-, and the methyl esters of the methyl ethers (Geipert), 1904, A., i, 319.
- **3-Methyl-6-*iso*propyltritanolactone,** 2-hydroxy- (v. Liebig), 1908, A., i, 541.
- **4-Methyl-1- and -3-propyluracil** (Bückandorff), 1912, A., i, 55.
- **Methylprotocatechualdehyde-*m*-carbonate** (Pauly and Alexander), 1909, A., i, 590.
- **Methylprunol** (Power and Moore), 1910, T., 1106.
- **3-Methylpulegene,** constitution of (Rupe, Schobel, and Abegg), 1912, A., i, 573.
- **Methyl*iso*pulegene** (Ebert), 1909, A., i, 246.
- **3-Methylpulegol** (Rupe, Schobel, and Abegg), 1912, A., i, 573.
- **3-Methyl*iso*pulegol** and its acetyl derivative (Rupe and Ebert), 1908, A., i, 663.
- **Methyl*iso*pulegyl alcohol** and chloride (Ebert), 1909, A., i, 246.
- **8-Methylpurine** and its additive salts (Isay), 1906, A., i, 218.
- **4-Methylpyran-2:6-dicarboxylic acid** and its methyl ester and dibromide (Blaise and Gault), 1907, A., i, 333.
- **Methylpyrazinophenazine,** hydroxy- (Hinsberg and Schwantes), 1904, A., i, 198.
- **α-, β-, and γ-3-Methylpyrazo*iso*coumarazone,** and 4-bromo-, and 4-iodo-, (Michaelis, Krug, Leo, and Ziesel), 1910, A., i, 513.
- **3-Methylpyrazo*iso*coumarazone-4-carboxylic acid** (Michaelis and Leo), 1910, A., i, 515.
- **Methylpyrazole** (Wallach and Steindorff), 1904, A., i, 106.
- **1-Methylpyrazole,** 4-chloro- (Mazzara and Borgo), 1906, A., i, 702.
- **3-Methylpyrazole,** 5-chloro-, 4:5-*di*-chloro-, 5-chloro-4-bromo-, and its perbromide and 5-chloro-4-iodo- (Michaelis and Lachwitz), 1910, A., i, 641.
  - 4-amino-5-hydroxy-, and 4-nitro-5-hydroxy-, salts and derivatives of (Bülow, Haas, and Schmachtenberg), 1910, A., i, 903.
- **3-Methylpyrazole-1-acetic acid,** 5-chloro-, and its salts and derivatives, and 5-chloro-4-bromo- (Michaelis and Schmidt), 1910, A., i, 640.
- **3-Methylpyrazole-4-azobenzene-4′-*p*-azosalicylic acid,** 5-hydroxy- (Bülow and Haas), 1911, A., i, 339.
- **1-Methylpyrazole-3-carboxylic acid** (Jowett and Potter), 1903, T., 469 ; P., 56.
- **3-Methylpyrazole-1-carboxylic acid,** 5-chloro-, ethyl ester (Michaelis and Schmidt), 1910, A., i, 640.
- **4-Methylpyrazole-5-carboxylic acid** (Klages and Rönneburg), 1903, A., i, 529.
- **4-Methylpyrazole-3:5-dicarboxylic acid** and its glycol ethyl ester (Wolff, Bock, Lorentz, and Trappe), 1903, A., i, 209.
  - and its ethyl ester (Feist), 1906, A., i, 332.
- **3-Methylpyrazole-1-propionic acid,** 5-chloro-, and its salts and derivatives, and 5-chloro-4-bromo- (Michaelis and Schmidt), 1910, A., i, 640.
- **3-Methylpyrazole-4-*iso*propylenecarboxylic acid,** 5-hydroxy-lactone of. See 3:4-Dimethyl-1:2-pyrazo-6:7-pyrone.
- **5-Methyl-3-pyrazolidone,** 1-nitroso-, and its salts (Muckermann), 1909, A., i, 839 ; 1911, A., i, 814.
- **3-Methylpyrazoline** and its phenylcarbamide and picrate (Maire), 1908, A., i, 290.
- **5-Methylpyrazoline,** preparation of, from crotonaldazine (Hladík), 1903, A., i, 740.
- **5-Methylpyrazoline-1-carboxylamide** (Nef), 1905, A., i, 4.
- **3-Methyl-5-pyrazolone** and its 4-alkyl derivatives (Locquin), 1904, A., i, 694.
  - and 4-*iso*nitroso- (Wolff), 1904, A., i, 722.
  - condensation of, with acetylacetone (Wolff), 1905, A., i, 840.

**3-Methyl-5-pyrazolone**, 4-bromo-, and 4:4-*di*bromo- (Muckermann), 1911, A., i, 815.
  4-bromo-4-nitro- (Wislicenus and Göz), 1912, A., i, 53.
  4-*iso*nitroso- (Betti), 1904, A., i, 533; (Wolff), 1904, A., i, 722; (Bülow and Schaub), 1908, A., i, 687.

**3-Methylpyrazolone-4-*iso*butylenecarboxylic acid** and its lactone (Wolff and Schreiner), 1908, A., i, 291.

**3-Methylpyrazolone-1-carbamidine** (Schestakoff and Kazakoff), 1912, A., i, 1032.

**3-Methylpyrazolone-4-*iso*propylenecarboxylic acids**, isomeric (Wolff), 1905, A., i, 839; (Wolff and Schreiner), 1908, A., i, 292.

**3-Methylpyrazoquinazoline**, 7-chloro-, 4:7-*di*chloro-, and 7-hydroxy-, and its silver salt and chloro-derivative (Michaelis, Krug, Leo, and Ziesel), 1910, A., i, 513.

**Methylpyrazylmethylpyrazolone** (Stollé), 1905, A., i, 839.

**5-Methylpyridazin-6-one-3-carboxylic acid** (Blaise and Gault), 1911, A., i, 520.

**2-Methylpyridine.** See α-Picoline.

**4-Methylpyridine.** See γ-Picoline.

**Methylpyridinecarboxylic acid**, isolation of, from soils, and its relation to soil fertility (Schreiner and Shorey), 1908, A., ii, 889.

**2-Methylpyridine-6-carboxylic acid** and its hydriodide and chloride (Turnau), 1908, A., i, 912.
  hydriodide and methiodide of (Turnau), 1905, A., i, 547.

**Methylpyridine-4-carboxylic acids**, 3- and 5-, 2:6-*di*hydroxy-. See Methylcitrazinic acids.

**2-Methylpyridine-3:5-dicarboxylic acid**, 6-hydroxy-, and its salts (Simonsen), 1908, T., 1030; P., 136.
  ethyl-ammonium and ethyl-silver ester salts (Simonsen), 1908, T., 1028; P., 136.

**Methylpyridinium** ferrichloride (Scholtz), 1910, A., i, 96.
  hydroxide, behaviour of, in the animal organism (Kohlrausch), 1909, A., ii, 918; 1912, A., ii, 74.

**Methyl-2-pyridone**, 3-bromo-, and 3:5-*di*bromo- (Decker, Kaufmann, Sassu, and Wisloki), 1911, A., i, 1024.

**1-Methyl-4-pyridone**, hydroxy-, and its salts, and bromo-, chloro-, and nitro-derivatives (Maquenne and Philippe), 1905, A., i, 80.

**Methylpyridonium** picrate (Totani and Hoshiai), 1910, A., i, 696.

**2-Methylpyrimidine** and 6-amino-, 6-chloro-, and 6-hydroxy-, and their salts (Gabriel), 1904, A., i, 1060.

**3-Methylpyrimidine**, 4:5-*di*amino-2:6-*di*hydroxy- (Merck), 1906, A., i, 536.

**4-Methylpyrimidine**, 2-cyanoamino-6-hydroxy- (Merck), 1905, A., i, 670.

**5-Methylpyrimidine**, amino-, chloro-, chloroamino-, and iodoamino-derivatives (Gerngross), 1905, A., i, 942.
  2:4-*di*hydroxy-. See Thymine.

**Methylpyrimidines**, 4- and 5-, 2-cyanoamino-6-hydroxy-, and their salts (Pohl), 1908, A., i, 576.

**4-Methylpyrimidine-5-acetic acid**, 2:6-*di*amino- (Johnson and Heyl), 1908, A., i, 59.

**4-Methyl-2-pyrimidone**, 5:6-*di*amino-, and its monoformyl compound (Johns), 1909, A., i, 192.

**1-Methyl-6-pyrimidone-2-thiolacetic acid**, 5-hydroxy- (Johnson and Jones), 1909, A., i, 423.

**3-Methylpyrone** (Willstätter and Pummerer), 1905, A., i, 458.

**3-Methyl-α-pyrone**, 6-chloro-, and 6-hydroxy- (Thole and Thorpe), 1911, T., 2223.

**4-Methyl-α-pyrone**, 6-chloro-, and 6-hydroxy-, and its salts (Bland and Thorpe), 1912, T., 865.

**2-Methylpyrone-6-acetic acid** (Collie and Hilditch), 1907, T., 789; P., 92.

**6-Methyl-2-pyrone-3:5-dicarboxylic acid**, ethyl ester, and its derivatives and reactions (Simonsen), 1908, T., 1022; P., 136.
  conversion of, into methyltrimesic acid (Simonsen), 1910, T., 1910; P., 200.

**2-Methyl-6-pyrophthalone** and its sodium and additive salts (Scholze), 1905, A., i, 825; (Eibner), 1905, A., i, 928.
  and its sodium salt (Scholze), 1906, A., i, 33.

**1-Methylpyrrole**, conversion of, into 2-methylpyrrole (Pictet and Steinmann), 1904, A., i, 771.

**1-Methylpyrrole**, 2-chloro-3:4:5-*tri*bromo- (Mazzara and Borgo), 1905, A., i, 817.
  2:5-*di*chloro-3:4-*di*bromo- (Mazzara and Borgo), 1905, A., i, 659.
  2:3:5-*tri*chloro-4-bromo- (Mazzara), 1904, A., i, 771.
  2:3:5-*tri*- and 2:3:4:5-*tetra*-chloro- (Mazzara and Borgo), 1904, A., i, 614.

**2-Methylpyrrole**, formation of, from 2-methylpyrrolidine (Testoni and Mascarelli), 1904, A., i, 188.
  condensation product of (Plancher and Ciusa), 1907, A., i, 80.
**Methylpyrroles**, pyrogenic transformation of, into pyridine derivatives (Pictet), 1905, A., i, 545.
**Methylpyrroleazobenzene** and its salts (Plancher and Soncini), 1903, A., i, 450.
**1-Methylpyrrole-2-carboxylic acid** and its methylamide, bromo-derivatives of (Khotinsky and Pictet), 1904, A., i, 772.
**2-Methylpyrrole-3-carboxylic acid**, ethyl ester (Benary), 1911, A., i, 319.
**1-Methylpyrrolidine** (Tafel and Wassmuth), 1907, A., i, 720.
  and its methiodide (Mascarelli and Testoni), 1904, A., i, 340.
  from nicotine (Pictet), 1905, A., i, 543.
  picrate (Löffler and Freytag), 1909, A., i, 830.
**2-Methylpyrrolidine**, synthesis of (v. Braun), 1910, A., i, 819.
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**1-Methylpyrrolidine-2:2-dicarboxylic acid** and its methylamides, and their esters (Willstätter and Ettlinger), 1903, A., i, 363.
**1-Methylpyrrolidone**, platinichloride (Gansser), 1909, A., i, 703.
**4-Methyl-5-pyrrolidone**, 2-imino-ω-4-*di*cyano- (Thole and Thorpe), 1911, T., 1687.
**1-Methylpyrroline** and its salts from tobacco leaves (Pictet and Court), 1907, A., i, 954.
**2-Methylpyrroline** (Mascarelli and Testoni), 1904, A., i, 340.
*C*-**Methylpyrroline** and its salts, from black pepper (Pictet and Court), 1907, A., i, 954.
**Methylpyruvic acid** and its phenylhydrazone (Fittig and Dannenberg), 1904, A., i, 555; (Erlenmeyer and Arbenz), 1905, A., i, 241.
**Methylquinaldines**, *o*- and *p*-. See 2:8- and 2:6-Dimethylquinolines.
**2-Methylquinazoline** (Gabriel), 1903, A., i, 446.
**2-Methylquinazoline**, 4-hydroxy-, and *di*bromo-, and *penta*bromo- (Bogert and Heidelberger), 1912, A., i, 215.
**8-Methylquinazoline**, 2:4-*di*chloro- and 2:4-*di*hydroxy- (Jürgens), 1907, A., i, 1037.
**Methylquinazolines**, 6- and 8-, 4-chloro- (Gabriel and Colman), 1905, A., i, 944.
**6-Methylquinazolines**, 7-amino-(Bogert and Kropff), 1909, A., i, 843.
**3-Methyl-4-quinazoline-2-carboxymethylamide** (Bogert and Gortner), 1910, A., i, 284.
**2-Methylquinazolinesulphonic acid**, bromo-4-hydroxy-, and its barium salt (Bogert and Heidelberger), 1912, A., i, 215.
**2-Methyl-4-quinazolone** (Anschütz and Schmidt), 1903, A., i, 56; (Anschütz, Schmidt, and Greiffenberg), 1903, A., i, 57.
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**2-Methyl-4-quinazolone**, 3-amino-, and its formyl, acetyl, and other derivatives, and hydrochloride and picrate (Bogert and Gortner), 1909, A., i, 679.
  6- and 7-amino-, and their derivatives (Bogert, Amend, and Chambers), 1910, A., i, 894.
  7-amino-, and its nitro-, and acetyl derivatives (Bogert and Klaber), 1908, A., i, 467.
  3-hydroxy- (Anschütz, Schmidt, and Greiffenberg), 1903, A., i, 58.
  7-nitro-, and its derivatives from 4-nitroacetylanthranil (Bogert and Klaber), 1908, A., i, 466.
**2-Methyl-4-quinazolone-5-carboxylic acid** and its methyl ester (Bogert and Jouard), 1909, A., i, 306.
**2-Methyl-4-quinazolone-6-carboxylic acid**, 7-nitro- (Bogert and Kropff), 1909, A., i, 843.
**2-Methyl-4-quinazolonyl-3-acetic acid** and **3-*o*-benzoic acid**, 7-nitro-, ethyl esters, amides, and nitriles (Bogert and Klaber), 1908, A., i, 468.
**2-Methyl-4-quinazolonyl-3-(2:5-dimethyl-3:4-dicarbethoxypyrrole)**, 7-nitro- (Bogert and Klaber), 1908, A., i, 468.
**2-Methyl-4-quinazolonyl-3:7′-(2′-methyl-4′-quinazolone)**, 7-amino-, acetyl derivative (Bogert, Amend, and Chambers), 1910, A., i, 895.
**Methylquindolanol** (Fichter and Boehringer), 1907, A., i, 93; (Fichter and Probst), 1907, A., i, 977.
**Methylquinic acid**, methyl ester (Knöpfer), 1907, A., i, 423.
**Methylquinnitrole**, bromo-derivatives (Zincke and Buff), 1905, A., i, 880.
*o*-**Methylquinnitrole**, *tetra*bromo-, and its nitrate (Zincke and Klostermann), 1907, A., i, 322.

*o*-**Methylquinnitrole**, *tetra*chloro-, nitrate, and its derivatives (Zincke and Pfaffendorf), 1912, A., i, 964.

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**Methyl-ψ-quinol,** chloro-derivatives and their acetates (Zincke, Schneider, and Emmerich), 1903, A., i, 758.

**Methyl-ψ-quinol,** bromo-, chlorobromo-, and their acetyl derivatives (Zincke and Buff), 1905, A., i, 880.

2:3:5-*tri*chloro-6-hydroxy-, and the action of chlorine on, and its acetate (Zincke, Schneider, and Emmerich), 1903, A., i, 758.

**Methylquinolanol,** *di*nitro-, and its derivatives (Kaufmann and Strübin), 1911, A., i, 321.

**Methylquinoline,** *ω-o-di*hydroxy- (Manasse), 1903, A., i, 29.

*di*nitro-, oxide (Kaufmann and Strübin), 1911, A., i, 323.

**2-Methylquinoline** (*quinaldine*) and its additive salts (Heller and Sourlis), 1908, A., i, 913.

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**2-Methylquinoline,** 3-amino-, and its additive salts and acetyl derivative, and 4-hydroxy- (Stark), 1907, A., i, 973.

3-amino- and 3-amino-4-hydroxy-, fluorescence of (Stark), 1907, A., i, 974.

7-amino-, and its additive salts and acyl derivatives (Alber), 1905, A., i, 235.

6-bromo-, and 5-(or 7-), 6- and 8-chloro- (Bartow and McCollum), 1904, A., i, 686.

8-chloro-2-thiol- (Fischer, Berckhemer, and Ulbricht), 1903, A., i 53.

**2-Methylquinoline,** 3-cyano-, and its **4-carboxylic acid** and their salts (v. Walther), 1903, A., i, 652.

5-nitro-, and its methiodide and picrate (Decker and Remfry), 1905, A., i, 829.

6-nitro- (Cohn and Springer), 1903, A., i, 493.

**3-Methylquinoline,** preparation and reactivity of (Wislicenus and Elvert), 1909, A., i, 420.

**3-Methylquinoline,** 2-chloro- (Ornstein), 1907, A., i, 444.

**4-Methylquinoline** (*lepidine*), condensation of, with aldehydes (Loew), 1903, A., i, 577.

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**4-Methylquinoline,** 3-chloro- (Ellinger and Flamand), 1907, A., i, 153.

**5-Methylquinoline** and its salts (v. Jakubowski), 1911, A., i, 82.

**6-Methylquinoline,** bromo-, chloro-, iodo-, and iodonitro-derivatives and their platinichlorides (Edinger and Ekeley), 1903, A., i, 58.

8-iodine-derivatives, and their additive salts (Willgerodt and Frischmuth), 1905, A., i, 547.

**6-Methylquinoline,** 5-bromo-8-nitro-, and its platinichloride (Kunckell), 1910, A., i, 507.

3-cyano- (Finger and Breitwieser), 1909, A., i, 512.

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**8-Methylquinoline,** halogen and nitro-derivatives (Howitz and Nöther), 1906, A., i, 885.

**8-Methylquinoline,** 2-amino-, 2-chloro-, 2-chloroamino-, and 2-chloronitro-, and salts of the chloro-compound (Fischer and Dreverhoff), 1903, A., i, 52.

3:*ω-di*bromo- and 3-bromo-*ω*-hydroxy-, and its phenyl ether (Howitz and Schwenk), 1905, A., i, 471.

**1-Methyl*iso*quinoline,** and its salts (Pictet and Gams), 1910, A., i, 774.

**3-Methyl*iso*quinoline,** 1:4:6-(or 1:4:7-) *tri*hydroxy- (Kusel), 1904, A., i, 619.

**7-Methyl*iso*quinoline** and 1-chloro-, and their additive salts (Findeklee), 1906, A., i, 43.

2- and **4-Methylquinolines,** methoperchlorates and their derivatives (König), 1912, A., i, 654.

6- and **8-Methylquinolines,** me nitrates of (Decker, Gadomska, tho-Girard), 1905, A., i, 469. and

**4-Methylquinoline-2-acrylic acid** (Koenigs and Mengel), 1904, A., i, 528; (Spallino and Cucchiaroni), 1912, A., i, 582.

**3-Methylquinolinecarboxylic acid** (3-*methylcinchonic acid*), methyl ester, amide and chloride of (Meyer), 1906, A., i, 358.
  2-hydroxy-, methyl ester (Meyer), 1906, A., i, 109; 1907, A., i, 342.

**4-Methylquinoline-2-carboxylic acid** and its salts (Koenigs and Mengel), 1904, A., i, 528.

**2-Methylquinoline-4-carboxylic acid**, methyl ester and amide (Meyer), 1907, A., i, 343.

**3-Methylquinoline-4-carboxylic acid**, and 2-chloro- and 2-hydroxy-, and their salts, esters, amide, anilide, and chloride (Ornstein), 1907, A., i, 443.

**5-Methylquinoline-8-carboxylic acid**, and its salts (v. Jakubowski), 1911, A., i, 81.

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**1-Methylquinolinium** 1-methosulphate and its dichromate and picrate, 8-nitro- (Decker, Gadomska, Sandberg, and Stavrolopoulos), 1905, A., i, 374.

**2-Methylquinolinium** alkyl sulphates, dyes from (Farbenfabriken vorm. F. Bayer & Co.), 1905, A., i, 548.

**2-Methyl*iso*quinolinium** picrate (Decker and Kaufmann), 1911, A., i, 1023.

**1-Methyl-2-quinolone**, 6-amino-, and its acetyl derivative (Decker and Engler), 1903, A., i, 518.
  5-, 7-, and 8-amino- and their derivatives (Decker and Engler), 1909, A., i, 512.
  6:8-*di*bromo-, 3-bromo-8-nitro-, and 6:8-*di*nitro- (Decker, Gadomska, Sandberg, and Stavrolopoulos), 1905, A., i, 374.
  bromo- and chloro-6- and -8-hydroxy-derivatives (Howitz and Witte), 1905, A., i, 470.
  5-bromo-6-hydroxy- (Howitz and Bärlocher), 1905, A., i, 375.
  6- and 7-chloro- (Fischer, Berckhemer, and Ulbricht), 1903, A., i, 53.
  5-chloro-6-hydroxy- (Howitz and Bärlocher), 1903, A., i, 279.
  4-cyano- (Kaufmann and Albertini), 1909, A., i, 958.
  6-hydroxy- (Howitz and Bärlocher), 1903, A., i, 279; (Decker and Engler), 1903, A., i, 518.

**1-Methyl-2-quinoline**, 8-hydroxy- (Decker and Engler), 1903, A., i, 518.
  8-*mono*- and -*di*-nitro- (Decker and Stavrolopoulos), 1903, A., i, 719.

**1-Methyl-2-quinolone-4-carboxylic acid** and its methyl ester and chloride (Meyer), 1907, A., i, 344.
  sodium and silver salts (Kaufmann and Albertini), 1909, A., i, 959.

*meri***Methylquinonedi-imonium** bromide (Piccard), 1911, A., i, 569.

**8-Methylquinophthaline** and its *N*-alkyl derivatives (Gaebelé), 1904, A., i, 89.

**8-Methylquinophthalone** and its bromo-derivatives (Gaebelé), 1904, A., i, 89.

**Methylquinotoxine**, *iso*nitroso- (Rohde and Antonaz), 1907, A., i, 634.

**3-Methylquinoxaline**, 2-propionyl derivative (Sachs, Herold, and Alsleben), 1907, A., i, 629.

6-(or 7)-**Methylquinoxaline-2-benzoic acid**, 3-hydroxy-, and its lactone and imino-compound (Manuelli and Maselli), 1906, A., i, 308.

**Methyl-red, and its salts and derivatives** (Howard and Pope), 1911, T., 1333; P., 206.
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**Methylresoflavin** and its formula and ether ester and ether acid (Herzig and Tscherne), 1907, A., i, 421.

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**Methylrhamnoside**, methylation of (Purdie and Young), 1906, T., 1201; P., 201.

**Methyl-*d*-ribonic acid**, *a*-hydroxy-, and its calcium salt and phenylhydrazone (Lewis), 1909, A., i, 768.

**Methylsabinaketol** (*sabinene hydrate*) (Wallach), 1907, A., i, 1060.

**3-Methylsalicylaldehyde**, 5-nitro-, acetyl derivatives (Auwers and Bondy), 1904, A., i, 1052, 1053.

**4-Methylsalicylaldehyde**, 3-nitro- (Clayton), 1910, T., 1405.
  5-nitro-, and its oxime and phenyl hydrazone (Clayton), 1910, T., 1406.

*N*-**Methylsalicylaldoxime** and its hydrochloride (Beckmann and Netscher), 1909, A., i, 391.

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*N*-**Methylsalicylamide**, preparation of, and its benzoyl derivatives (McConnan and Marples), 1907, T., 194; P., 18.

*N*-**Methylsalicylamide**, hydroxy- (Einhorn), 1905, A., i, 344, 646.
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**4-Methylsalicylic acid.** See *p*-Toluic acid, 3-hydroxy-.
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**3-Methylsalicyl-phosphorous chloride and -phosphoric chloride** dibromide (Anschütz, Schroeder, Weber, and Anspach), 1906, A., i, 506.
**4-Methylsalicyl-phosphorous chloride and -phosphoric chloride** dibromide (Anschütz and Schroeder), 1906, A., i, 506.
**5-Methylsalicyl-phosphorous chloride and -phosphoric chloride** dibromide (Anschütz and Schroeder), 1906, A., i, 507.
**Methylsantolate** and its acetate (Harries, Haarmann, and Stähler), 1904, A., i, 231.
**Methylscopolaminium salts** (Hoffmann, La Roche & Co.), 1912, A., i, 897.
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**Methylscopoline** and its aurichloride (Schmidt), 1906, A., i, 104.
**5-Methylselenolacridol** and its salts (Edinger and Ritsema), 1903, A., i, 720.
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*α*-**Methyl***iso***serine.** See *iso*Butyric acid, *β*-amino-*α*-hydroxy-.
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*α*-**Methylsorbic acid** (*heptinoic acid*), and its salts (Jaworsky), 1903, A., i, 729.
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*α*-**Methylsparteine,** formation of, from isosparteine (Valeur), 1908, A., i, 736.
  new method of ring formation of, by the action of iodine (Valeur), 1908, A., i, 1006.
  isomerisation of (Moureu and Valeur), 1908, A., i, 44.
  and isosparteine, reciprocal transformation of (Valeur), 1909, A., i, 119.
*α*-**Methylsparteine,** *di*iodo-, action of acids on (Valeur), 1909, A., i, 119.
**Methyl***iso***sparteine,** and its picrate and methiodide (Moureu and Valeur), 1911, A., i, 319, 562.
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**Methyl***iso***sparteinium** hydroxide (Valeur), 1909, A., i, 119.
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**6-Methyl-*α*-stilbazole,** 2′- and 4′-*mono*- and *di*-amino-, and their additive salts and diazotisation and 2′- and 4′-nitro-, and their additive salts (Ahrens and Luther), 1907, A., i, 965.
*m*-**Methyl-2-stilbazole** and its dihydro-derivative and their salts, and **-2-stilbazoline** (Freund), 1906, A., i, 883.
**6-Methyl-2-stilbazole,** 2′-hydroxy-, and its salts (Bramsch), 1909, A., i, 415.
**4-Methyl-4-stilbazole** and its dihydro-derivative and their salts, and **-4-stilbazoline** (Freund), 1906, A., i, 883.
**4′-Methyl-4-stilbazole** and its additive salts and reduction products (Düring), 1905, A., i, 233.
**4′-Methyl-4-stilbazoline** and its platinichloride (Düring), 1905, A., i, 233.
**Methylstilbene,** synthesis of (Tiffeneau), 1904, A., i, 872.
*α*-**Methylstilbene** (Hell), 1904, A., i, 242; (Vorländer and v. Liebig), 1904, A., i, 426.
**3-Methylstilbene,** 6-nitro-4-cyano-, and 4:6-*di*nitro- (Borsche), 1912, A., i, 180.
**8-Methylstilbene,** 5-nitro- (Pschorr and Quade), 1906, A., i, 849.
*m*-**Methylstilbene-*o*-carboxylic acid** and its silver salt (Lieck), 1906, A., i, 49.
**3-Methylstilbene-2-carboxylic acid** (Müller), 1909, A., i, 159.
**4′-Methylstilbene-2-carboxylic acid,** *α*-cyano-, and its salts and lactone (Gyr), 1907, A., i, 417.
*α*-**Methylstyrene** ozonide (Harries and v. Riedenstein), 1912, A., i, 674.
*α*-**Methylstyrene,** *β*-bromo-, and the action of sodium and magnesium on (Tiffeneau), 1903, A., i, 241.
  *β*-chloro- (Tiffeneau), 1907, A., i, 305.
*o*-**Methylstyrene** (Emde), 1912, A., i, 802.
*p*-**Methylstyrene,** *α*-chloro- (Auwers and Keil), 1903, A., i, 621.
  *β*-bromo- and *β*-chloro- (Auwers and Keil), 1904, A., i, 27.

*p*-**Methylstyrene,** β-chloro- (Auwers and Hessenland), 1907, A., i, 400.

α-**Methylstyrenesulphonic acid,** salts (Bistrzycki and Mauron), 1907, A., i, 1039.

*o*-**Methylstyryl methyl ketone** (*o-tolylideneacetone*) (Meerwein), 1908, A., i, 90.

*m*-**Methylstyryl methyl ketone,** 6-hydroxy-, semicarbazone of, and its behaviour towards aniline (Borsche and Merkwitz), 1904, A., i, 947.

*p*-**Methylstyryl methyl ketone** (*p-tolylideneacetone*) and its azine, oxime, phenylhydrazone, semicarbazone and *m*-nitro- (Gattermann), 1906, A., i, 590.

**2-*p*-Methylstyryl-6-methylpyridine,** and its salts and dibromide (Werner), 1903, A., i, 574.

**2-*p*-Methylstyryl-6-methylquinoline** and its hexahydro-derivative and their additive salts (Gasda), 1906, A., i, 42.

*p*-**Methylstyryl nonyl ketone** (Scholtz and Meyer), 1910, A., i, 562.

**2-*p*-Methylstyrylquinoline,** 5- and 8-nitro-, and their additive salts (Schmidt), 1906, A., i, 39.

**1-Methylsuberol,** $\Delta^1$-**Methylsuberenene** and its nitrosate, nitrosochloride, and nitrolamine, and **Methylsuberone** and **Methylsuberenone** and their semicarbazones (Wallach), 1906, A., i, 370.

**Methylsuccinamide,** *di*hydroxy-, and its compounds with benzene and *p*-nitrophenol (Einhorn), 1905, A., i, 345.

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  condensation of β-naphthaldehyde with (Behrend and Klinckhard), 1911, A., i, 294.
  acid esters (Bone, Sudborough, and Sprankling), 1904, T., 542; P., 64.

**Methylsuccinic acid,** bromo-, and its anhydride (Ilsky), 1905, A., i, 323.
  *di*bromo-, action of phenylhydrazine on (Fichter, Guggenheim, and Brasch), 1908, A., i, 105.

**Methylsuccinic acid,** ω-cyano-, ethyl ester (Hope), 1912, P., 193.
  α-hydroxy-, and its amide (Lutz), 1903, A., i, 147.

**Methylsuccinic anhydride,** rate of hydration of (Rivett and Sidgwick), 1910, T., 1677; P., 200.

*o*-**Methylsulphaminebenzoic acid** and its potassium salt (Remsen and Clark), 1903, A., i, 823.

**2:2′-Methylsulphone-4:4′-azoxytoluene** (Zincke and Rollhaüser), 1912, A., i, 551.

**2-Methylsulphonebenzoic acid,** 4-amino-, acetyl derivative (Zincke and Rollhaüser), 1912, A., i, 551.

**3-Methylsulphone-1-phenyl-5-methylpyrazole** (Michaelis and Hahn), 1905, A., i, 379.

**Methylsulphonepropionic acid** (Schneider), 1910, A., i, 660.

γ-**Methylsulphonepropylphenylthiocarbamide** (Schneider), 1910, A., i, 660.

γ-**Methylsulphonepropylthiocarbamide** (Schneider), 1910, A., i, 660.

**3-Methylsulphone-1-*o*- and -*p*-tolyl-5-methylpyrazoles** (Michaelis and Behrens), 1905, A., i, 381.

**Methylsulphonyl chloride,** *tri*chloro-, action of sodium ethoxide on (Brown and Cowie), 1908, A., i, 3.

**Methylsulphoxylic acid,** amino-, sodium salt (Chemische Fabrik von Heyden), 1910, A., i, 229.

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  hydroxylamino- (Binz and Marx), 1910, A., i, 728.

**Methyltanacetone** and its semicarbazone (Haller), 1905, A., i, 602.

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**Methyltartaric acid,** hydroxy-, and its brucine salts (Vongerichten and Müller), 1906, A., i, 143.

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β-**Methyltaurine,** formation of (Young and Crookes), 1906, T., 71.
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**5-Methyl-1:2:3:4-tetrahydroacridine,** 8-hydroxy- and its sulphate (Borsche, Schmidt, Tiedtke, and Rottsieper), 1910, A., i, 881.

*d*-**2-** and **3-Methyltetrahydroacridines,** and their salts (Borsche, Schmidt, Tiedtke, and Rottsieper), 1910, A., i, 884.

*d*-**2-** and **3-Methyl-1:2:3:4-tetrahydroacridine-5-carboxylic acid** (Borsche, Schmidt, Tiedtke, and Rottsieper), 1910, A., i, 884.
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*a*-**Methyltetrahydroberberine** (Freund and Mayer), 1905, A., i, 657.
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**Methyltetrahydrocarbazole,** 4- or 2-, and its picrate (Plancher and Carrasco), 1904, A., i, 777.
**Methyl-$\Delta^{1(6)}$-tetrahydrocarbazoles,** 4- and 9-, and 10-nitro- of the 4-compound (Borsche, Witte, and Bothe), 1908, A., i, 366.
**2-Methyl-$\Delta^{8:9}$-tetrahydrocymene,** 2-chloro- (Rupe and Emmerich), 1908, A., i, 433.
**2-Methyltetrahydrofuran** (Franke and Kohn), 1907, A., i, 816.
**2-Methyltetrahydrofuran,** *tri*chloro- (Hamonet), 1906, A., i, 133.
**4-Methyltetrahydroglyoxaline,** 2-imino- (*propyleneguanidine*), platinichloride and aurichloride (Schenck), 1910, A., i, 100.
*N*-**Methyltetrahydro-*β*-naphthylamine** and its nitrate, hydrochloride, and nitrosoamine (Smith), 1904, T., 735; P., 111.
**1-Methyl-$\Delta^3$-tetrahydronicotinic acid.** See Arecaidine.
methyl ester. See Arecoline.
*N*-**Methyltetrahydropapaverine,** amino-, and its salts (Pschorr, Stählin, and Silberbach), 1904, A., i, 612.
**3-Methyl-1:2:3:4-tetrahydrophenazine,** 1-oximino- (Borsche), 1910, A., i, 179.
**1-Methyl-$\Delta^3$-tetrahydropyridine,** 3-cyano-, hydrochloride of (Wohl and Johnson), 1908, A., i, 49.
**1-Methyl-$\Delta^3$-tetrahydropyridine-3-aldehyde.** See Arecaidinealdehyde.
**2-Methyltetrahydropyrimidine** and its salts (Haga and Majima), 1903, A., i, 291.
**2-Methyltetrahydroquinazoline** and its picrate (Gabriel), 1903, A., i, 446.
**1-Methyltetrahydroquinazoline-2:4-dione,** 3-amino-, and its acetyl derivative (Kunckell), 1910, A., i, 439.
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**2-Methyltetrahydroquinoline** (*tetrahydroquinaldine*), racemic, resolution of (Pope and Read), 1910, T., 2199; P., 251.
**2-Methyltetrahydroquinoline** (*tetrahydroquinaldine*), relation between constitution and rotatory power of derivatives of (Pope and Winmill), 1912, T., 2309; P., 275.
*d*- and *l*-**2-Methyltetrahydroquinoline** and their hydrochlorides (Pope and Read), 1910, T., 2203.
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**2-Methyltetrahydro*iso*quinoline,** behaviour of, towards chromic acid (Freund and Beck), 1904, A., i, 618.
**2-Methyltetrahydro*iso*quinoline,** 1-cyano- (Pyman), 1909, T., 1750.
6-and 7-hydroxy-, and 7:8-*di*hydroxy-, hydrochloride (Pyman and Remfry), 1912, T., 1604; P., 228.
6:7-*di*hydroxy- and its hydrochloride and picrate (Pyman), 1910, T., 275.
7- and **8-Methyltetrahydroquinolines,** and their pyridine dyes (König and Becker), 1912, A., i, 496.
**2-Methyltetrahydroquinolineazole,** 8-bromo-, and its hydrochloride and platinichloride (Kunckell), 1910, A., i, 507.
**2-Methyltetrahydroquinoline-1-carboxylic acid,** methyl ester (van Dorp), 1905, A., i, 82.
*N*-**Methyltetrahydroquinoliniumacetic acid,** ethyl ester, *d*-camphorsulphonate and iodide of (E. and O. Wedekind and Oechslin), 1907, A., i, 1074.
**2-Methyltetrahydro*iso*quinoliniumacetic acid** iodide, *l*-menthyl ester of (Wedekind and Ney), 1912, A., i, 501.
**2-Methyltetrahydro*iso*quinolone,** 6:7-*di*hydroxy- (Pyman), 1910, T., 271.
**2-Methyltetrahydrothiophen** and its derivatives (v. Braun), 1911, A., i, 75.
**4-Methyl-2(tetrahydro-2′-thio-6′-pyrimidonethiol)-1:6-dihydro-6-pyrimidone** (Johnson and Shepard), 1911, A., i, 925.
**3-Methyl-1:2:3:4-tetrahydroxanthylium chloride** and its derivatives (Borsche and Geyer), 1912, A., i, 892.
*β*-**Methyltetramethylenediamine,** preparation of (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 303.
**Methyl*dicyclo*tetranetetracarboxylic acid,** ethyl ester (Jones), 1905, T., 1063; P., 216.
**1-Methyltetrone-4-carboxylic acid,** ethyl ester (Benary), 1911, A., i, 673.
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**Methylthebainium** salts (GERBER), 1911, A., i, 154.
**Methylthebainone** (*thebainone methyl ether*) and its methiodide (PSCHORR), 1905, A., i, 921.
**Methylthebainonemethine** and its derivatives (PSCHORR), 1905, A., i, 921.
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**Methylthebaol** from codeine (KNORR), 1903, A., i, 849.
  diacetyl derivative (VONGERICHTEN and HÜBNER), 1907, A., i, 718.
**8-Methyltheobromine,** *tri*chloro-, preparation of (BOEHRINGER & SÖHNE), 1904, A., i, 340.
**6-Methylthianthrene,** amino- and nitroamino-derivatives (FRÖHLICH), 1907, A., i, 632.
**4-Methyl-1:4-thiazan** and its salts (CLARKE), 1912, T., 1586 ; P., 218.
**4-Methyl-1:4-thiazan-4-acetic acid,** 4-bromo-, ethyl ester (CLARKE), 1912, T., 1809.
**5-Methyl-4-thiazolidone-3-acetic acid,** 2-thio- (KÖRNER), 1908, A., i, 510.
**ψ-Methylthiocarbamide** chloroacetate (WHEELER and MERRIAM), 1903, A., i, 525.
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**β-Methylthiocodide** and its methiodide (PSCHORR and KRECH), 1910, A., i, 422.
**7-Methylthiocoumarin** (CLAYTON), 1908, T., 527 ; P., 26.
**7-Methylthiocoumarin,** 6-nitro- (CLAYTON and GODDEN), 1912, T., 214.
**Methyl-γ-thiocyanopropylsulphone** (SCHNEIDER), 1910, A., i, 659.
**5-Methyl-1:2:3-thiodiazole** (WOLFF, BOCK, LORENTZ, and TRAPPE), 1903, A., i, 208.
  and its additive salts (WOLFF, KOPITZSCH, and HALL), 1904, A., i, 828.
**5-Methyl-1:2:3-thiodiazole-4-carboxylic acid** and its ethyl ester (WOLFF, BOCK, LORENTZ, and TRAPPE), 1903, A., i, 208 ; (WOLFF, KOPITZSCH, and HALL), 1904, A., i, 828.
*N*-**Methylthiodiphenylamine** mercuri-iodide (BARNETT and SMILES), 1910, T., 985.
  chloro- (PAGE and SMILES), 1910, T., 1116.
*N*-**Methylthiodiphenylamine-2:7-diphthaloylic acid** (SCHOLL, SEER, and TRITSCH), 1911, A., i, 558.
**Methylthioglycoll-phenyl- -phenylmethyl-, and-*p*-tolyl-hydrazides** (FRERICHS and FÖRSTER), 1910, A., i, 192.
γ-α-**Methylthiohydantoic acid** and its barium salt (KOMATSU), 1911, A., i, 684.
**2-** and *r*-**5-Methylthiohydantoin** (KOMATSU), 1911, A., i, 684.
**1-Methylthiolanthraquinone** (GATTERMANN), 1912, A., i, 999.
**5-Methylthiolanthraquino-1-thiazole** (GATTERMANN), 1912, A., i, 1005.
*p*-**Methylthiolbenzaldehyde** and its derivatives (GATTERMANN), 1912, A., i, 985.
*o*- and *p*-**Methylthiolbenzaldehydes** and their derivatives (FRIEDLÄNDER and LENK), 1912, A., i, 702.
**1-Methylthiolbenzene,** 4-iodo-, and its derivatives (ZINCKE and JÖRG), 1911, A., i, 40.
*o*-**Methylthiolbenzoic acid** (HINSBERG), 1910, A., i, 260.
  and its methyl ester (FRIEDLÄNDER and MÜLLER), 1907, A., i, 335 ; (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1909, A., i, 231.
  preparation of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1908, A., i, 648, 797.
*o*-**Methylthiolbenzoic acid,** 4-chloro- (FARBWERKE VORM. MEISTER, LUCIUS, and BRÜNING), 1909, A., i, 797.
*p*-**Methylthiolbenzoic acid** (ZINCKE and JÖRG), 1911, A., i, 40 ; (GATTERMANN), 1912, A., i, 985.
*p*-**Methylthiolbenzonitrile** (ZINCKE and JÖRG), 1911, A., i, 40.
**5-Methylthiol-4-benzoyl-1-phenyl-3-methylpyrazole.** See 4-Benzoyl-ψ-thiopyrine.
**3-Methylthiolbenzyl** acetate, 2:5-*di*-bromo-4-hydroxy-, and its diacetyl derivative (ZINCKE, FROHNEBERG, and KEMPF), 1911, A., i, 440.
**3-Methylthiolbenzyl alcohol,** 2:5-*di*-bromo-4-hydroxy-, and its methyl ether (ZINCKE, FROHNEBERG, and KEMPF), 1911, A., i, 440.
**6-Methylthiol-3-benzyldihydro-2-pyrimidone** (WHEELER and JOHNSON), 1909, A., i, 677.
**2-Methylthiol-4-benzylidene-1:5-dihydro-5-glyoxalone** (JOHNSON and NICOLET), 1912, A., i, 808.
**2-Methylthiol-4-benzylidene-1-methyl-1:5-dihydro-5-glyoxalone** (JOHNSON and NICOLET), 1912, A., i, 808.

**Methylthiolcarbonic acid,** methyl ester (Delépine), 1910, A., i, 613.

**Methylthiolcarboxymethylbenzoic acid.** See 4-Carboxy-*m*-tolylthiolacetic acid.

**5-Methylthiol-*o*-cresol,** 3-bromo-, 3:6-*di*bromo-, and 3-nitro-, and their derivatives (Zincke and Brune), 1911, A., i, 198.

**3-Methylthiol-*p*-cresol,** 5-bromo-, and 2:5-*di*bromo-, and their derivatives (Zincke and Kempf), 1911, A., i, 287.

2:5-*di*bromo-, ψ-bromide, and its derivatives (Zincke, Frohneberg, and Kempf), 1911, A., i, 439.

**6-Methylthioldihydro-2-pyrimidone** (Wheeler and Johnson), 1909, A., i, 677.

**2-Methylthioldihydro-4-pyrimidone,** 6-amino- and 5-bromo-6-amino- (Johnson and Johns), 1905, A., i, 836.

5:6-*di*amino- and 6-amino-5-nitroso- (Johnson, Johns, and Heyl), 1906, A., i, 771.

**2-Methylthioldihydro-6-pyrimidone** and its 4- and 5-methyl, 4-methyl-5-ethyl, and 4-phenyl derivatives (Wheeler and Merriam), 1903, A., i, 524.

hydrochloride (Wheeler, Bristol, and Johnson), 1905, A., i, 483.

**2-Methylthioldihydro-6-pyrimidone-5-carboxylic acid** and its ethyl ester (Wheeler, Johnson, and Johns), 1907, A., i, 560.

**2-Methylthiol-1:4-dimethyldihydro-6-pyrimidone** (Wheeler and McFarland), 1909, A., i, 678.

**6-Methylthiol-1:4-** and **-3:4-dimethyldihydro-2-pyrimidone** (Wheeler and McFarland), 1909, A., i, 970.

**5-Methylthiol-1:3-dimethylpyrazole** and its derivatives (Michaelis and Lachwitz), 1910, A., i, 642.

**4′-Methylthioldiphenylamine,** 4-nitro-2-amino-, and 2:4-*di*nitro- (Zincke and Jörg), 1911, A., i, 40.

**3-Methylthiol-1:5-diphenyl-4-benzyldihydrotriazole,** 5-hydroxy- and 5-iodo- (Busch, Kamphausen, and Schneider), 1903, A., i, 532.

**Methylthioldiphenylhydrotriazole,** iodo-, and its methyl derivative (Busch and Schneider), 1903, A., i, 534.

**Methylthiol-1:3-diphenylpyrazole** and its 1-*m*-nitro-derivative and their sulphones (Michaelis and Willert), 1908, A., i, 215.

**3-Methylthiol-1:5-diphenylpyrazole** and its 4-nitroso-derivative and sulphone (Michaelis and Willert), 1908, A., i, 214.

**3-Methylthiol-1:5-diphenylthiodiazoline,** bromo-, chloro-, and 5-iodo-derivatives of (Busch, Kamphausen, and Schneider), 1903, A., i, 532.

**3-Methylthiol-4:5-diphenyl-1-*p*-tolyldihydrotriazole,** hydroxy-, and iodo- (Busch and Blume), 1903, A., i, 535.

**5-Methylthiol-1:3-diphenyltriazole** (Wheeler and Statiropoulos), 1905, A., i, 722.

**6-Methylthiol-3-methylacetophenone** (Auwers and Arndt), 1909, A., i, 176.

**Methylthiolmethylbenzoic acid.** See Methylthioltoluic acid.

**6-Methylthiol-3-methyldihydro-2-pyrimidone** (Wheeler and Johnson), 1909, A., i, 677.

**6-Methylthiol-4-methyldihydro-2-pyrimidone, and action of methyl iodide,** and benzyl chloride on (Wheeler and McFarland), 1909, A., i, 969.

**2-Methylthiol-5-methyldihydro-6-pyrimidone** and its **4-carboxylic acid** and its ethyl ester and potassium salt (Johnson), 1907, A., i, 879.

**6-Methylthiol-5-methyl-** and **3:5-dimethyl dihydropyrimidones** (Wheeler, McFarland, and Storey), 1910, A., i, 139.

**2-Methylthiol-4-methyldihydro-6-pyrimidone-5-acetic acid** (Johnson and Heyl), 1908, A., i, 59.

**2-Methylthiol-4-methylpyrimidine,** 6-chloro-, and 6-thio- (Wheeler and McFarland), 1909, A., i, 969.

**2-Methylthiol-5-methylpyrimidine,** 4:6-*di*chloro- (Wheeler and Jamieson), 1904, A., i, 942.

**1-Methylthiolnaphthalene-4-azodimethylaminobenzene** and its hydrochloride (Zincke and Schütz), 1912, A., i, 348.

**1-Methylthiolnaphthalene-4-azo-β-naphthol** (Zincke and Schütz), 1912, A., i, 348.

**1-Methylthiolnaphthalene-4-diazonium** salts (Zincke and Schütz), 1912, A., i, 348.

**1-Methylthiolnaphthalene-4-diazosulphonic acid,** salts of (Zincke and Schütz), 1912, A., i, 348.

**1-Methylthiolnaphthalene-4-hydrazinesulphonic acid,** potassium and barium salts (Zincke and Schütz), 1912, A., i, 348.

**2-Methylthiol-1-phenyl-4-benzylidenehydantoin** (Wheeler and Brautlecht), 1911, A., i, 500.

**5-Methylthiol-1-phenyl-3-methyl-4 antipyrinylpyrazole.** See Anti-ψ-thiopyrine.

**5-Methylthiol-1-phenyl-3-methylpyrazole** (4-*thiopyrine*) and its sulphone, and their additive salts, and 4-bromo- and nitro-compounds (Michaelis, Besson, Moeller, and Kober), 1904, A., i, 782.
and its salts and alkyl haloids, and 4-bromo- (Michaelis and Hahn), 1905, A., i, 379.
amino- and nitro-derivatives of (Michaelis, Graff, Gesing, and Boie), 1911, A., i, 234.

**5-Methylthiol-3-phenyl-1-methylpyrazole** ($\psi$-iso*thiopyrine*) and its derivatives (Michaelis and Dorn), 1907, A., i, 249.

**1-Methylthiolphenyl-4-methylsulphoxide** and its dibromide (Zincke and Frohneberg), 1909, A., i, 643.

**Methylthiolphenylthiodiazoline,** iodo- (Busch and Schneider), 1903, A., i, 534.

*p*-**Methylthiolphenyltrimethylammonium** chloride and iodide (Zincke and Jörg), 1909, A., i, 790.

**2-Methylthiolpyrimidine,** 6-amino- and 6-chloro- (Wheeler, Bristol, and Johnson), 1905, A., i, 483.
4:6-*di*amino-, -*di*chloro-, -chloroamino-, and 4:6-dimethyl derivative (Wheeler and Jamieson), 1904, A., i, 940.
4:6-*di*amino-, 5-bromo-4:6-*di*amino-4-chloro-6-amino-, and 4-chloro-5-bromo-6-amino- (Johnson and Johns), 1905, A., i, 837.

**2-Methylthioltoluene,** 4-amino-, 5-bromo-4-amino-, 5-bromo-4-iodo-, 4-cyano-, 4-iodo-, 4-iodo-2-*tri*chloro-, and 5-nitro-4-amino- (Zincke and Rollhaüser), 1912, A., i, 550.

**3-Methylthiol-*p*-toluic acid** (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 251.

**Methylthioltolyl** 4-iodochloride, 2-*tri*chloro- (Zincke and Rollhaüser), 1912, A., i, 551.

**2-Methylthiol-3-*p*-tolyl-6-methyl-3:4-dihydroquinazoline** and its additive salts (v. Walther and Bamberg), 1906, A., i, 387.

**3-Methylthiol-1-tolyl-5-methylpyrazoles.** See 3-$\psi$-Thiotolylpyrines.

**2-Methylthiol-*p*-tolyltrimethylammonium** chloride and iodide and their derivatives (Zincke and Rollhaüser), 1912, A., i, 550.

**3-Methylthiol-1:3:5-triphenyldihydrotriazole,** 5-hydroxy- and 5-iodo- (Busch, Kamphausen, and Schneider), 1903, A., i, 532.

**4-Methylthio-β-naphthaquinone** and its derivatives (Zincke and Schütz), 1912, A., i, 349.

**4-Methyl-(1)-thionaphthen,** 6-chloro-3-hydroxy- (Kalle & Co.), 1912, A., i, 209.
2-hydroxy- (Badische Anilin- & Soda-Fabrik), 1910, A., i, 764.

**4-Methyl-(1)-thionaphthen-*o*-carboxylic acid,** 6-chloro-3-hydroxy- (Kalle & Co.), 1912, A., i, 209.

**4-Methylthionaphthenquinone,** oxime and phenylhydrazone of, and the benzoyl derivative of the latter (Auwers and Arndt), 1911, A., i, 587.

**5-Methylthionaphthenquinone-*p*-dimethylamino-2-anil** (Pummerer), 1910, A., i, 510.

**Methylthioncarbamic acid,** phenyl ester (Rivier), 1906, A., i, 948.

**2-Methylthiophen,** influence of light and heat on the bromination and chlorination of (Opolski), 1905, A., i, 367.

**3-Methylthiophen,** influence of light and heat on the bromination and chlorination of (Opolski), 1906, A., i, 34.

**5-Methylthiophen-2-aldehyde** and its derivatives (Grishkewitsch-Trochimowsky), 1911, A., i, 806.

**4-Methylthiophen-5-carboxylic acid,** 3-hydroxy- (Hinsberg), 1910, A., i, 335.

**4-Methylthiophen-2:5-dicarboxylic acid** 3-hydroxy-, ethyl hydrogen ester (Hinsberg), 1910, A., i, 335.

**3-Methylthio-1-phenyl-4:5-dimethylpyrazole.** See Methyl-$\psi$-3-thiopyrine.

**3-Methylthio-1-phenyl-5-methyl-4-ethylpyrazole.** See Ethyl-$\psi$-3-thiopyrine.

**1-Methylthiopyridone,** methiodide and ethiodide (Fischer and Merl), 1903, A., i, 52.

**Methylthiopyrine** and its additive salts, trioxide, and dichloro-derivative (Michaelis, Moeller, and Kober), 1904, A., i, 781.

**Methyl-3-thiopyrine** and **-$\psi$-3-thiopyrine** (Michaelis and Drews), 1907, A., i, 157.

**Methyl-$\psi$-thiopyrone** and its additive salts and sulphone (Michaelis, Besson, Moeller, and Kober), 1907, A., i, 783.

**Methyl-$\psi$-thiopyrrolidone** (Tafel and Lawaczeck), 1907, A., i, 720.

**1-Methylthioquinolone** methiodide and allyl iodide (Fischer and Merl), 1903, A., i, 52.

**Methylthiosalicylic acid.** See *o*-Methylthiolbenzoic acid.

*S*-**Methyl*di*thiourethane** (v. Braun), 1903, A., i, 14.

**Methylthioxanthenol**, methyl ether (Decker and v. Fellenberg), 1905, A., i, 668.

**Methylthioxanthone** (Davis and Smiles), 1910, T., 1297; P., 174.

**2-Methylthioxanthone** (Mayer), 1910, A., i, 261.

**5-Methylthioxanthone**, 2-hydroxy- (Christopher and Smiles), 1911, T., 2050.

**7-Methylthioxanthone**, 2-amino-, and 2-hydroxy- (Christopher and Smiles), 1911, T., 2049.

2:3:4-*tri*hydroxy-, and its trimethyl ether (Ullmann and Sone), 1911, A., i, 739.

**Methylthymines**, 1- and 3- (Johnson, Clapp, and Martin), 1908, A., i, 835.

**Methyl-tin compounds** (Pope and Peachey), 1903, P., 290; A., i, 741; (Pfeiffer and Lehnardt), 1903, A., i, 470, 802.

*N*-**Methyl-*o*-tolidine** and its salts and derivatives (Rassow and Becker), 1911, A., i, 932.

**Methyl-*p*-toluamide**, hydroxy- (Einhorn), 1905, A., i, 344.

**Methyl-*o*-toluidine**, preparation of (v. Braun), 1908, A., i, 626, 685.

bromo-derivatives and their perbromides (Fries), 1906, A., i, 647.

**Methyl-*m*-toluidine**, 2:4:6-*tri*nitro-, and its nitroamine (Blanksma), 1903, A., i, 104.

**Methyl-*p*-toluidine**, preparation of (v. Braun), 1908, A., i, 626.

*N*-benzoyl derivative (v. Braun), 1908, A., i, 626.

**Methyl-*p*-toluidine**, ω-cyano- (Badische Anilin- & Soda-Fabrik), 1903, A., i, 336; 1905, A., i, 438.

**Methyl-*p*-toluidinoacetonitrile** (v. Braun), 1908, A., i, 626, 628.

**Methyl-γ-*p*-toluidinopropylcarbinol** and and its salts and benzoyl derivative (Markwalder), 1907, A., i, 638.

**Methyl γ-*p*-toluidinopropyl ketone** and its oxime and its hydrochloride (Markwalder), 1907, A., i, 638.

**Methyltolyl**. See Tolylmethyl-.

**β-Methyl-βζζ-trialkylsulphoneheptanes** (Posner), 1904, A., i, 324.

**1-Methyl-1:2:3-triazole** and its aurichloride (Dimroth and Fester), 1910, A., i, 645.

and its **5-carboxylic acid** (Wolff and Krüche), 1912, A., i, 1030.

**5-Methyl-1:2:3-triazole**, 1-amino-, and its salts and **4-carboxylic acid** (Wolff and Hall), 1904, A., i, 120.

**1-Methyl-1:2:4-triazole** and its additive salts (Pellizzari and Soldi), 1905, A., i, 672.

**1-Methyl-1:2:5-triazole**, 3-bromo- and 3-chloro- (Tamburello and Milazzo), 1907, A., i, 1088.

**3-Methyl-1:2:5-triazole**, 4-chloro- (Tamburello and Milazzo), 1907, A., i, 1088.

**Methyl-1:2:4-triazoleaminoxime** (Rinman), 1905, A., i, 389.

**1-Methyl-1:2:3-triazole-4-carboxylic acid**, 5-hydroxy-, methyl ester, and 5-chloro-, and its methyl ester (Dimroth and Hess), 1909, A., i, 269.

**5-Methyl-1:2:3-triazole-4-carboxylic acid** and its ethyl ester (Wolff, Bock, Lorentz, and Trappe), 1903, A., i, 206.

**1-Methyl-1:2:3-triazol-5-one-4-carboxylic acid**, methyl ester (Dimroth and Hess), 1909, A., i, 269.

**Methyl-1:2:5-triazole-3- and -4-carboxylic acids**, 1- and 3-, and their salts, ethyl esters, and cyanides (Peratoner and Azzarello), 1907, A., i, 980.

**Methyltriazomalonic acid** and its ethyl ester and amide (Forster and Müller), 1910, T., 131; P., 4.

**2-Methyl-1:3-triazo-7:0′-pyrimidine**. See 2-Methyl-1:3:7:9-benzotetrazole.

**α-Methyltricarballylic acid**, and its ethyl ester (Hope), 1912, T., 902.

formation of (Haworth and Perkin), 1908, T., 591.

**β-Methyltricarballylic acid** and its anhydride (Hope), 1912, T., 910; P., 93.

**α-Methyltricarballylic acids**, isomeric (Anschütz and Deschauer), 1906, A., i, 728.

**Methyl-*n*-tridecylcarbinol** and its salts (Pickard and Kenyon), 1911, P., 313.

**Methyl *n*-tridecyl ketone** and its semicarbazone (Pickard and Kenyon), 1911, P., 312.

**Methyltriethylammonium** iodide and platinichloride (Pope and Read), 1912, T., 528.

*per*iodides (Strömholm), 1903, A., i, 462.

**Methyltrimesic acid**, formation of, oxidation of, and its salts and esters (Simonsen), 1910, T., 1910; P., 200.

**Methyltrimethenyldicarboxylic acid** (Feist and Beyer), 1906, A., i, 335.

**Methyltrimethylene.** See Methyl*cyclo*propane.

**β-Methyltrimethylene** dibromide. See *iso*Butane, *di*bromo-.

*as*-**Methyl-3:3′-trimethylenedibenzo-*spiro*pyran** (Borsche and Geyer), 1912, A., i, 894.

**2-Methyltrimethyleneimine** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 822.

**Methyltrimethyleneoxidedicarboxylic acid**, chloro-, diamide of (Leuchs), 1905, A., i, 545.

**3-Methyltriphenylcarbinol**, 4-hydroxy-. See Diphenyl-6-hydroxy-*m*-tolylcarbinol.

**3-Methyltriphenylmethane**, 4-hydroxy-. See Diphenyl-6-hydroxy-*m*-tolylmethane.

**Methyltripropylammonium** ferrichloride (Scholtz), 1910, A., i, 96.
  iodide, compound of thiocarbamide and (Atkins and Werner), 1912, T., 1990.
  platinichlorides, two forms of (Le Bel), 1904, A., i, 718.

**3-Methyltritanic acid**, 2-amino-, lactam of (v. Liebig), 1908, A., i, 646.

**6-Methyltritanolactone**, 2:4-*di*hydroxy- (v. Liebig), 1908, A., i, 541.

**Methyltritanolactones**, 2-hydroxy- (v. Liebig), 1908, A., i, 541.

**Methyltropine** and **ψ-Methyltropine** and their salts and benzoyl derivatives (Willstätter), 1903, A., i, 359.

*N*-**Methyltyrosine**, synthesis of (Friedmann and Gutmann), 1910, A., i, 741; (Johnson and Nicolet), 1912, A., i, 585.

**Methyl-*l*-tyrosine** (Fischer and Schrauth), 1907, A., i, 686.

**α-Methylumbelliferone** (Michael), 1905, A., i, 563.

**Methyl-*n*-undecylcarbinol** (Pickard and Kenyon), 1911, T., 58.

*d*-**Methyl-*n*-undecylcarbinol** and its hydrogen phthalate and brucine and strychnine salts of the latter (Pickard and Kenyon), 1911, T., 60.

**Methyl undecyl ketone** and its oxime and semicarbazone (Guérin), 1904, A., i, 143.
  action of phosphorus pentachloride on (Blaise and Guérin), 1904, A., i, 143.

**Methyluracil**, acidic constants of (Wood), 1906, T., 1833.
  oxidation and derivatives of (Behrend and Struve), 1911, A., i, 158.
  alkyl derivatives of (Hoebel), 1907, A., i, 557.
  mercuric salt (Auld), 1907, T., 1047; P., 152.

**1-Methyluracil** (2:6-*diketo*-1-*methyltetrahydropyrimidine*) (Johnson and Heyl), 1907, A., i, 728.
  synthesis of, and 5-bromo- and 5-nitro- (Johnson and Heyl), 1907, A., i, 728.

**1-Methyluracil**, 4:5-*di*amino-, and its 5-formyl derivative (Engelmann), 1909, A., i, 193.

**1-Methyluracil**, 5-hydroxy-, and 2-thio-5-hydroxy- (Johnson and Jones), 1909, A., i, 423.

**3-Methyluracil**, preparation of (Wheeler and Johnson), 1909, A., i, 677.

**3-Methyluracil**, 5-bromo- (Johnson and Clapp), 1908, A., i, 836.

**4-Methyluracil**, benzyl derivatives of (Wheeler and McFarland), 1909, A., i, 677.
  6-thio- (Wheeler and McFarland), 1909, A., i, 969.

**5-Methyluracil.** See Thymine.

**1-Methyluracil-3-acetic acid** (Wheeler and Liddle), 1908, A., i, 693.

**4-Methyluracil-5-acetic acid**, synthesis of, and its esters and salts (Johnson and Heyl), 1908, A., i, 59.

**5-Methyluramil** (Fischer and Dilthey), 1905, A., i, 37.

**Methylurethane**, bromo-, chloro-, and iodo-amino-, acetyl derivatives (Curtius and Callan), 1910, A., i, 789.
  hydroxy- (Curtius), 1912, A., i, 429.
  ethyl ether. See Carboxy-β-methyl-α-ethylhydroxylamine.

**Methyluric acids**, 3- and 7-, oxidation of, in the presence of ammonia (Grohmann), 1911, A., i, 691.
  physiological action of (Starkenstein), 1907, A., ii, 640.
  mercuric salts (Auld), 1907, T., 1046; P., 152.

**Methyluric acid glycol** (Biltz and Krebs), 1910, A., i, 526.

**Methyl*iso*valeramide**, hydroxy- (Einhorn), 1905, A., i, 344.

**β-Methylvaleramides**, *d*- and *r*- (Marckwald and Nolda), 1909, A., i, 351.

**Methylvaleranilide**, preparation of (Auger), 1904, A., i, 805.

**α-Methylvaleric acid**, *di*bromo- (Kijner and Klawikordoff), 1911, A., i, 635.
  β-imino-α-cyano-, ethyl ester (Baron, Remfry, and Thorpe), 1904, T., 1752.
  β-imino-γ-cyano-, ethyl ester (Thorpe), 1912, T., 256.

**β-Methylvaleric acid**, α-amino-. See *iso*Leucine.
- α-bromo- (Ehrlich), 1908, A., i, 396.
  - ethyl ester (Fichter and Gisiger), 1910, A., i, 88.
- α-hydroxy-. See β-Methyl-β-ethyl-lactic acid.
- ω-hydroxy-, and its salts (Fichter and Beisswenger), 1903, A., i, 459.
- α-oximino-, and its derivatives (Bouveault and Locquin), 1905, A., i, 636.

*d*-**β-Methylvaleric acid**, α-bromo-, and its chloride (Abderhalden, Hirsch, and Schuler), 1909, A., i, 770.

γ-**Methylvaleric acid**, ketonic ester, and its semicarbazone (Freylon), 1910, A., i, 358.

α-**Methyl*iso*valeric acid.** See αββ-Trimethylpropionic acid.

**Methyl-δ-valerolactone** (Fichter and Beisswenger), 1903, A., i, 459.

α-**Methylvaleronitrile**, α-hydroxy- (Ultée), 1909, A., i, 294.

*d*-**β-Methylvalerylglycine**, α-bromo- (Abderhalden, Hirsch, and Schuler), 1909, A., i, 770.

**Methylvanillin.** See Veratraldehyde.

**Methylvanillylideneacetone.** See 3:4-Dimethoxystyryl methyl ketone.

**Methylvanillylidenecinnamylideneacetone.** See 3:4-Dimethoxystyryl cinnamylidenemethyl ketone.

**1-Methyl-4-vinylbenzene**, β-*di*chloro- (Zincke and Schwabe), 1908, A., i, 337.

**Methylvinylcarbinol** (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 599.

**2-Methylvinylperimidine** (Sachs and Steiner), 1909, A., i, 970.

**2-Methyl-6-vinylpiperidine** and its derivatives (Löffler and Remmler), 1910, A., i, 633.

**2-α-Methylvinylpyridine** and its salts (Löffler and Grosse), 1907, A., i, 439.

**Methyl-violet**, poisonous action of (Fühner), 1912, A., ii, 792.
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**Naphthalenesulphonacetic acids,** α- and β-, amides, nitriles, and thioamides of, and the bromo- and chloro-derivatives of the β-amide (Tröger and Hille), 1905, A., i, 336.

**Naphthalene-1-** and **-2-sulphonalkylamides** (Chattaway), 1905, T., 161; P., 7.

**Naphthalenesulphonchloroalkylamides,** α- and β- (Chattaway), 1904, P., 208.

**Naphthalenesulphonedialkylacetonitriles,** α- and β- (Tröger and Vasterling), 1905, A., i, 871.

**β-Naphthalenesulphonedimethylacetic acid** (Tröger and Vasterling), 1905, A., i, 871.

**Naphthalenesulphonethenylaminoximes,** α- and β- (Tröger and Volkmer), 1905, A., i, 356.

**Naphthalene-1-** and **-2-sulphonhalogen-** and **-alkylhalogenamides** (Chattaway), 1905, T., 156; P., 71.

**Naphthalene-1-sulphonic acid,** 5:7-*di*amino-. See 1:3-Naphthylenediamine-5-sulphonic acid.

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4:8-*di*hydroxy- (Bucherer and Uhlmann), 1909, A., i, 788.

6- and 7-nitro-, and their amides and chlorides (Kappeler), 1912, A., i, 251.

5:7-*di*nitro- (Dannerth), 1907, A., i, 910.

**Naphthalene-2-sulphonic acid,** menthyl ester, and its rotation (Patterson and Frew), 1906, T., 332; P., 19.
  sodium salt, solubility of, in water and in hydrochloric acid (Fischer), 1907, A., i, 25.
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  5:8-*di*chloro- (Badische Anilin- & Soda-Fabrik), 1911, A., i, 434.
  1-cyano-, sodium salt and its acid chloride (Kalle & Co.), 1912, A., i, 208; (Friedländer, Voroschtsoff, and Eckstein), 1912, A., i, 294.
  4:7-*di*hydroxy-, azo-compounds from the *o*-aminophenols and (Chemische Fabrik Griesheim-Elektron), 1908, A., i, 480.
  4:5-*di*nitro-, and its salts (Eckstein), 1903, A., i, 20.
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β-**Naphthalenesulphonyl-*dl*-alaninamide** (Koenigs and Mylo), 1909, A., i, 87.
*N*-α- and -β-**Naphthalenesulphonylallylglycine** (Alpern and Weizmann), 1911, T., 87.
β-**Naphthalenesulphonyl-*dl*-aminobutyramide** (Koenigs and Mylo), 1909, A., i, 87.
β-**Naphthalenesulphonyl-*dl*-β-aminobutyric acid** (Fischer and Scheibler), 1911, A., i, 527.
**Naphthalene-β-sulphonylaminodiphenyldiazonium** salts (Morgan and Micklethwait), 1908, T., 618.
β-**Naphthalenesulphonylaminolaurylglycine** (Hopwood and Weizmann), 1911, T., 573.
β-**Naphthalenesulphonyl-α-amino-*n*-nonoylglycine** (Hopwood and Weizmann), 1911, T., 1579.
β-**Naphthalenesulphonylanthranilic acid** and its ethyl ester, and chloride (Schroeter and Eisleb), 1909, A., i, 576.
β-**Naphthalenesulphonyl-*l*-asparagine** (Koenigs and Mylo), 1909, A., i, 88.
**Naphthalene-β-sulphonyl-benzidine** and -*p*-**nitroaminodiphenyl** (Morgan and Micklethwait), 1908, T., 617.
β-**Naphthalenesulphonylclupeine** (Hirayama), 1909, A., i, 344.
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*as*-**Naphthalene-β-sulphonylethyl-benzidine** and -**diphenyldiazonium** salts and their azo-β-naphthols (Morgan and Micklethwait), 1908, T., 620.
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β-**Naphthalenesulphonylmethylamide,** nitroso- (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 726.
1-β-**Naphthalenesulphonyl-2-methyl-5-ethyltetrahydropyridine** (Koenigs, Bernhart, and Ibele), 1907, A., i, 792.
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β-**Naphthalenesulphonyl-*dl*-phenylalaninamide** (Koenigs and Mylo), 1909, A., i, 88.
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*N*-β-**Naphthalenesulphonyltyrosine,** sodium salt and ethyl ester (Abderhalden and Funk), 1910, A., i, 320.
*o*-β-**Naphthalenesulphonyltyrosine** hydrochloride and ester hydrochloride (Abderhalden and Funk), 1910, A., i, 320.
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**Naphthalene-1:4:8-tricarboxylic acid** and its silver salt (Graebe and Haas), 1903, A., i, 409.
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α-**Naphthalides,** anilides, and *p*-toluidides of normal fatty acids, melting points of (Robertson), 1908, T., 1033; P., 120.

*peri*-**Naphthalideacetic acid** and its silver salt (Pauly and Walter), 1911, A., i, 986.
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*N*-**Naphthalimido-*p*-benzoquinoneimine** (Ostrogovich and Mihailescu), 1912, A., i, 314.
*N*-**Naphthalimidocitraconamic acid** (Ostrogovich and Mihailescu), 1912, A., i, 313.
*N*-**Naphthalimidocitraconimide** (Ostrogovich and Mihailescu), 1912, A., i, 313.
*N*-**Naphthalimidomaleinamic acid** and its salts (Ostrogovich and Mihailescu), 1912, A., i, 311.
*N*-**Naphthalimidomaleinimide** (Ostrogovich and Mihailescu), 1912, A., i, 312.
*N*-**Naphthalimidonaphthalimide** (Ostrogovich and Mihailescu), 1912, A., i, 313.
*N*-**Naphthalimidophthalimide** (Ostrogovich and Mihailescu), 1912, A., i, 313.
*N*-**Naphthalimidosuccinamic acid** (Ostrogovich and Mihailescu), 1912, A., i, 312.
*N*-**Naphthalimidosuccinimide** (Ostrogovich and Mihailescu), 1912, A., i, 312.
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*β*-**Naphthamorpholone** (Lees and Shedden), 1903, T., 759; P., 132.
**Naphthan-*β*-diols**, *cis* and *trans*, and their diacetates and diphenylurethanes, and *cis* + *trans*-compound (Leroux), 1909, A., i, 569.
**Naphthanthracridone** (Badische Anilin- & Soda-Fabrik), 1912, A., i, 504.
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**1:8-Naphthapenthiophen**, hydroxy-, and its acetyl derivative (Friedländer, Voroschtsoff, and Eckstein), 1912, A., i, 294.
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*αβ*-**Naphthaphenazine**, oxidation of, by chromic acid (Fischer), 1904, A., i, 111; (Fischer and Schindler), 1906, A., i, 609.
*αβ*-**Naphthaphenazine**, 7-amino- and 9-hydroxy-, and their derivatives (Ullmann and Heisler), 1910, A., i, 74.
8-amino-, and its *N*-acetyl derivative and additive salts, 8-amino-2-hydroxy-, and 8-amino-6-hydroxy- (Ullmann and Ankersmit), 1905, A., i, 553.
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*ββ*-**Naphthaphenazine**, *di*chloro- (Zincke and Fries), 1904, A., i, 1009.
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**αβ-Naphthaphenazine-*s*-** and *-as-αβ-***naphthazines** and their salts (Fischer and Schindler), 1908, A., i, 221.

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**Naphthaphenazoxonium chloride,** 4:8-*di*amino- (Kehrmann), 1905, A., i, 949.

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**Naphthaphenoxazine** and its derivatives (Fischer and Hepp), 1903, A., i, 654.

**Naphthaphenoxazone,** action of hydroxylamine hydrochloride on (Kehrmann and de Gottrau), 1905, A., i, 670.

**Naphthaphenoxazone,** 2-hydroxy-, and its methyl ether (Fischer and Hepp), 1903, A., i, 654.

**Naphthaprasindone,** amino-, and its acetyl derivative and salts (Kehrmann and Schwarzenbach), 1908, A., i, 297.

**Naphthapyranthrone** (Scholl), 1912, A., i, 195.

**1:2-α-Naphthapyrone** (Bezdzik and Friedländer), 1909, A., i, 416.

**αβ-Naphthapyrone,** 3-cyano-4-hydroxy-, and its ethyl ether, and potassium, and silver salts (Anschütz and Runkel), 1909, A., i, 732.
  4-hydroxy- (Anschütz and Runkel), 1909, A., i, 731.

**ββ-Naphthapyrone,** 3-cyano-4-hydroxy-, and its copper, and sodium salts and acetate (Anschütz and Graff), 1909, A., i, 665.
  4-hydroxy- (Anschütz and Graff), 1909, A., i, 665.

**αβ-Naphthapyrone-3-carboxylamide,** 4-hydroxy- (Anschütz and Runkel), 1909, A., i, 732.

**ββ-Naphthapyrone-3-carboxylamide,** 4-hydroxy- (Anschütz and Graff), 1909, A., i, 665.

**αβ-Naphthapyrone-3-carboxylic acid,** 4-hydroxy-, ethyl ester, and its ethyl ether, and metallic salts (Anschütz and Runkel), 1909, A., i, 731.

**ββ-Naphthapyrone-3-carboxylic acid,** 4-hydroxy-, ethyl ester, and its methyl ether, metallic salts, acetate, and phenylhydrazide from (Anschütz and Graff), 1909, A., i, 665.

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  |  **-Naphthaquinacridine** and its
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β–N–6
  |  **-Naphthaquinacridine** and its
α–CH–5 salicylate (Senier and Compton), 1909, T., 1632; P., 220.

**α-Naphthaquinol,** methyl ether (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 854.

**α-Naphthaquinol,** 8-amino- (Graebe and Oser), 1905, A., i, 54.

**1:2-Naphthaquinolanil** (A. and H. v. Euler), 1906, A., i, 370.

**α-Naphthaquinoline** and its amino- and nitro-derivatives and their additive salts (Haid), 1906, A., i, 605.

**β-Naphthaquinoline,** *di*amino-, and its salts and *mono-* and *di*-nitro- (Hepner), 1907, A., i, 244.

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**α-Naphthaquinone,** 8-amino-, acetyl derivative of (Graebe and Oser), 1905, A., i, 54.
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**β-Naphthaquinone,** oxidation of (Robinson), 1910, A., i, 270.
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  azoxonium compounds from (Kehrmann, de Gottrau, and Leemann), 1907, A., i, 554.

**β-Naphthaquinone**, 6-hydroxy- (Kehrmann), 1907, A., i, 563.
  7-hydroxy-, azonium compounds and azines from (Kehrmann and Brunel), 1908, A., i, 579.

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**2:6-Naphthaquinone**, 1:5-*di*chloro-, and its derivatives (Willstätter and Parnas), 1907, A., i, 1056.

**Naphthaquinones**, *α*- and *β*-, action of phenylsemicarbazide on (Borsche and Zeller), 1904, A., i, 1058.
  isomerism of derivatives of (Miller), 1911, A., i, 308, 465.
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**Naphthaquinoneanils**, formation of, from nitrosobenzene (v. Euler), 1906, A., i, 369; (A. and H. v. Euler), 1906, A., i, 370.

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**α-Naphthaquinone-4-cyanomethidecarboxylic acid**, ethyl ester, and its oxime and compound with *o*-phenylenediamine (Sachs and Craveri), 1905, A., i, 910.

**α-Naphthaquinone-4-dicarbethoxymethide** and **-4-dicyanomethide**, 2-hydroxy- (Sachs and Craveri), 1905, A., i, 910.

**Naphthaquinonediketohydrindene**, bromo-, and its salts and monoxime (Stadler), 1903, A., i, 102.

**β-Naphthaquinonedioxime** and its benzyl ether and their benzoyl derivatives (Hantzsch and Glover), 1907, A., i, 101.
  constitution and colour of derivatives of (Hantzsch and Glover), 1907, A., i, 1055.

**β-Naphthaquinone-3:6-disulphonic acid**, sodium salt, action of phenylhydrazine sulphate on (Teichner), 1905, A., i, 952.

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**α-Naphthaquinoneoxime**, methyl ether (Meisenheimer), 1907, A., i, 862.

**β-Naphthaquinone-2-oxime** and its dimethylacetal, and their benzoyl and *p*-nitrobenzyl derivatives, and the methyl ether of the oxime (Meisenheimer and Witte), 1904, A., i, 175.

**β-Naphthaquinone-2-oxime**, benzyl ether (Hantzsch and Glover), 1907, A., i, 101.

**β-Naphthaquinone-2-oxime**, 4-chloro-, and its compound with 4-chloro-1-hydroxy-2-naphthoic acid (Reissert), 1911, A., i, 368.

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**α-Naphthaquinone-4-phenylcyanomethide**, 2-hydroxy-, and its phenylhydrazone and methyl and ethyl ethers, and *p*-nitro-2-hydroxy-, and its methyl ether (Sachs and Craveri), 1905, A., i, 909.

**β-Naphthaquinonephenylhydrazone** (Goldschmidt and Löw-Beer), 1905, A., i, 390.

**β-Naphthaquinone-4-sulphonic acid**, condensations with (Sachs and Craveri), 1905, A., i, 909; (Sachs, Berthold, and Zaar), 1907, A., i, 426; (Sachs and Berthold), 1907, A., i, 651.
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**4′(2)-α-Naphthaquinonylaminodiphenylmethane**, 4-amino- (Pummerer and Brass), 1911, A., i, 655.

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**1:8-Naphthastyril-acetic** and **-phenylacetic acids**, and their ethyl esters (Schroeter and Rössler), 1903, A., i, 117.

**β-Naphthasulphonium-quinone** (*dihydro-β-naphthol sulphide*) and its phenylhydrazone (Hilditch and Smiles), 1911, T., 981.
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**β-Naphthasulphonium-quinone,** *di*bromo-, and its hydrogen bromide additive product (Nolan and Smiles), 1912, T., 1425 ; P., 188.

**1:8-Naphthasultam** and **1:8-*iso*Naphthasultam** and their derivatives (Dannerth), 1907, A., i, 909.

**1:8-Naphthasultam,** 2:4-*di*nitro- (Farbenfabriken vorm. F. Bayer & Co.), 1909, A., i, 711.

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**1:3:6:8-Naphthatetrazine,** derivatives of (Bogert and Dox), 1905, A., i, 841 ; (Bogert and Nelson), 1907, A., i, 660.

**1:3:7:9-Naphthatetrazine,** 4:6-*di*hydroxy- (Bogert and Kropff), 1909, A., i, 844.

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**1:2-Naphthathiophen,** hydroxy-, and its benzylidene derivative (Friedländer, Voroschtsoff, and Eckstein), 1912, A., i, 295.

**2:1-Naphthathiophen,** hydroxy-, and its derivatives (Friedländer, Voroschtsoff, and Eckstein), 1912, A., i, 294.

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**1:2-Naphthatriazine-7-sulphonic acid,** 5-hydroxy-, aminoaryl derivatives of, preparation of (Cassella & Co.), 1907, A., i, 451.

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**Naphthazine,** *di*hydroxy-, and its diacetyl derivative (Fischer and Schindler), 1908, A., i, 221.

*s*-**αβ-Naphthazine** and 2-hydroxy- (Ullmann and Ankersmit), 1905, A., i, 553.

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**αβ-Naphthiminazole-8-sulphonic acid,** 6-hydroxy-, and its 2-derivatives (Atkien-Gesellschaft für Anilin-Fabrikation), 1907, A. i, 975.

*peri*-**Naphthindandione.** See Keto*peri*naphthindene, hydroxy-.

**β-Naphthindigotin,** bromo-, preparation of (Gesellschaft für Chemische Industrie in Basel), 1908, A., i, 695.

α-**Naphthindole**, constitution of, and its **disulphonic acid** (Pschorr and Kuhtz), 1905, A., i, 236.

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**Naphthisatins**, α- and β-, derivatives of (C. and H. Dreyfus), 1904, A., i, 893.

**Naphthisatinnaphthalides**, αα- and ββ- (C. and H. Dreyfus), 1904, A., i, 832, 893.

**Naphtho-blue**, preparation and reactions of (Noelting and Philipp), 1908, A., i, 295.

**Naphthoic acid**, *di*-β-hydroxy- (Fischer, Freudenberg, and Hoesch), 1911, A., i, 875.

α-**Naphthoic acid**, menthyl ester, and its rotation (Rupe, Lotz, and Silberberg), 1903, A., i, 567.

α-**Naphthoic acid**, 8-amino-, *p*-toluenesulphonyl derivative (Ullmann and Cassirer), 1910, A., i, 201.
4-bromo- (Houben), 1906, A., i, 21.
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3:4-*di*hydroxy- (Heller and Ruhtenberg), 1912, A., i, 358.
*di*thio- (*α-naphthylcarbithionic acid*) and its salts (Houben and Pohl), 1906, A., i, 847.
ethyl and methyl esters (Houben and Schultze), 1912, A., i, 6.

β-**Naphthoic acid**, menthyl ester (Rupe and Münter), 1910, A., i, 398.

β-**Naphthoic acid**, 1:3-*di*amino-, and its ethyl ester (Atkinson and Thorpe), 1905, P., 305.
bromoimino- and chloroimino-, esters, (Hilpert), 1908, A., i, 830.
4-chloro-1-hydroxy-, and its compound with 4-chloro-β-naphthaquinoneoxime (Reissert), 1911, A., i, 368.
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**Naphthoic acids**, reduced optically active (Pickard and Neville), 1905, T., 1763; P., 257; (Pickard and Yates), 1906, T., 1101, 1484; P., 202, 244; 1909, T., 1011; P., 152.

**Naphthoic acids**, α- and β-, esterification of, by means of alcoholic hydrogen chloride (Kailan), 1907, A., ii, 853.

**Naphthoic acid hydrazide**, β-hydroxy-, and its benzylidene derivative (Franzen and Eichler), 1908, A., i, 831.

**Naphthoic alcohol**, hydroxy-. See 1-Methyl-β-naphthol, hydroxy-.

**Naphthol** derivatives, formation of, from papaverine and the binuclear quinones of the naphthalene series (Decker), 1908, A., i, 806.

**Naphthol**, bromo- and chloro-, thiobenzoates of (Taboury), 1904, A., i, 493.

α-**Naphthol**, bromination of (Hewitt, Kenner, and Silk), 1904, T., 1228; P., 126.
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condensation of, with benzophenone chloride (Clough), 1906, T., 773; P., 109; (Shrimpton), 1906, A., i, 659.
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1-**Naphthol**, 2-amino-, diacetyl and *N*-acetyl derivatives (Grandmougin), 1906, A., i, 717.
4-amino-, *N*-formyl derivative (Gaess), 1904, A., i, 809.
4- and 5-amino-, and their dibenzoyl derivatives (Sachs, Appenzeller, Herold, Mylo, Schädel, and Sutter), 1906, A., i, 830; (Sachs), 1906, A., i, 949.
8-amino-, and its acyl, nitroso-, and nitro-derivatives and 2:8-*di*amino- and its benzylidene and triacetyl derivatives (Fichter and Gageur), 1906, A., i, 839.
toluenesulphonyl derivative (Fichter and Kühnel), 1910, A., i, 108.
4:5-*di*amino- and 4:8-*di*nitro- (Graebe and Oser), 1905, A., i, 54.
4:8-*di*amino-, acetyl derivatives of (Fichter and Gageur), 1906, A., i, 840.
4-bromo-2-nitro- (Dahmer), 1904, A., i, 872.
4-chloro-, preparation of (Kalle & Co.), 1906, A., i, 659; (Aktien-Gesellschaft für Anilin-Fabrikation), 1912, A., i, 183.

**1-Naphthol,** 4-chloro-, 2-sulphide (CHRISTOPHER and SMILES), 1912, T., 717.
  4-chloro-2-bromo- (KING), 1911, P., 267.
  5-nitro-, and its acetate and benzoate, and 5-nitro-4-nitroso-, and its acetate (KAUFLER and BRÄUER), 1907, A., i, 799.
  2:4-*di*nitro-, reactions of, and its ethers (ULLMANN and BRUCK), 1909, A., i, 21.
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  5:4- and 8:4-nitronitroso- (GRAEBE and OSER), 1905, A., i, 54.
  7:4-nitronitroso- (GRAEBE), 1905, A., i, 54.
**β-Naphthol** and its derivatives, formation of, from β-naphthylamine (BADISCHE ANILIN- & SODA-FABRIK), 1903, A., i, 480.
  molecular weight of, in solution in solid naphthalene (PERMAN and DAVIES), 1907, T., 1114; P., 162.
  vapour pressures of solid solutions of, in naphthalene (SPERANSKY), 1904, A., ii, 237.
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  condensation of, with formaldehyde and ammonia (BETTI), 1904, A., i, 581.
  reaction between formaldehyde, hydroxylamine, and (BETTI), 1906, A., i, 653.
  action of methylolchloroacetamide on (EINHORN), 1908, A., i, 612.
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  molecular compounds of, with 2:3:5-trinitro-4-acetylaminophenol (MELDOLA and HAY), 1908, P., 210.
**β-Naphthol,** derivatives, mobility of substituents in (HEWITT and MITCHELL), 1906, T., 1167; P., 170.
  carbonic acid esters and diethylaminoethyl ether of (EINHORN and ROTHLAUF), 1911, A., i, 704.
  isomeric sulphides of (CRYMBLE, ROSS, and SMILES), 1912, T., 1146; P., 162.
    action of bromine with (NOLAN and SMILES), 1912, T., 1420; P., 188.
  *iso*sulphide, dehydration of (ROSS and SMILES), 1912, P., 275.
**2-Naphthol,** 1-amino-, *N*-benzoyl derivative of (AUWERS and EISENLOHR), 1908, A., i, 229.
    *N*- and *O*-benzoyl and -anisoyl derivatives of (SCHEIBER and BRANDT), 1908, A., i, 726.
    *N*-formyl derivative of (FISCHER and RÖMER), 1906, A., i, 541.
  2-, 3-, 4-, 5-, 6-, 7-, and 8-amino-, mono- and di-acyl derivatives of (SACHS, APPENZELLER, HEROLD, MYLO, SCHÄDEL, and SUTTER), 1906, A., i, 829; (SACHS), 1906, A., i, 949.
  4-amino-, and 1(or 3)-bromo-4-amino-, benzoyl derivatives, benzoates of (MEYER and WOLFSLEBEN), 1911, A., i, 631.
  7-amino- and 7-chloro- (FRANZEN and DEIBEL), 1908, A., i, 833.
  8-amino-, derivatives of (KEHRMANN and ENGELKE), 1909, A., i, 150.
    and 1-nitroso-8-, and their acetyl derivatives (KEHRMANN and ENGELKE), 1909, A., i, 150.
  bromo-, acetyl derivative of (HEWITT and MITCHELL), 1906, T., 1173; T., 171.
  1:3-*di*bromo-4-amino-, acetyl derivative, and its acetate (MEYER and WOLFSLEBEN), 1911, A., i, 632.
  6-bromo-1-nitro-, and its acetyl derivative (DAHMER), 1904, A., i, 872.
  1-chloro-4-bromo-, preparation of (MELDOLA and DALE), 1906, P., 157.
  α-nitro-, salts of (KORCZYŃSKI), 1909, A., i, 149.
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**Naphthols**, reaction of, with diazonium salts (Orton and Everatt), 1908, T., 1010; P., 118.
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  amino-derivatives, preparation of (Sachs, Appenzeller, Herold, Mylo, Schädel, and Sutter), 1906, A., i, 829; (Sachs), 1906, A., i, 949.
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  new differential reactions of the (Volcy-Boucher), 1908, A., ii, 990.
**Naphthols**, amino-, preparation of *O*-acetyl derivatives of (Farbenfabriken vorm. F. Bayer & Co.), 1909, A., i, 339.
  5-amino- (Sachs), 1907, A., i, 914.
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**β-Naphtholaldaminic bases**, functions of (Betti and Torricelli), 1903, A., i, 480.
**β-Naphtholaldehyde**, compounds of, with *p*-aminobenzhydrol and *p*-aminobenzophenone (Torrey and Porter), 1911, A., i, 340.
  hydrobromide (Gomberg and Cone), 1910, A., i, 872.
**β-Naphthol*iso*amylamine** and its picrate (Betti and Torricelli), 1903, A., i, 480.
**β-Naphtholamylbenzylideneamine** (Betti), 1903, A., i, 510.
**α-Naphtholarsinic acid.** See Naphthylarsinic acid, 4-hydroxy-.
**β-Naphtholazobenzene-4-arsinic acid** and its sodium salts (Barrowcliff, Pyman, and Remfry), 1908, T., 1897.
**Naphthol-*o*-azobenzoic acid** (Anschütz and Schmidt), 1903, A., i, 56.
*p*-**β-Naphtholazobenzoic acid**, *iso*butyl ester (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 381.
  *iso*propyl ether (Farbenfabriken vorm. F. Bayer & Co.), 1909, A., i, 921.
**β-Naphthol-*o*-, -*m*-, and -*p*-azobenzoic acids**, and the nitriles of the *m*- and *p*-acids (v. Niementowski), 1903, A., i, 133.
**β-Naphtholazo-α-naphthol-5-sulphonic acid** (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 207.
**β-Naphthol-1-azo-β-naphthol-4′-sulphonic acid** and its sodium salts (Anilinfarben- & Extrakt-Fabriken vorm. J. R. Geigy), 1907, A., i, 454.
**Naphthol-*p*-azo-*o*-nitrobenzaldehyde** (Sachs and Kantorowicz), 1906, A., i, 908.
**β-Naphthol-6-azo-2-nitrophenol-4-sulphonic acid** (Badische Anilin- & Soda-Fabrik), 1903, A., i, 663.
**β-*m*-2-Naphtholazophenylglutaric acid** and its barium salt (Kötz), 1907, A., i, 708.
**2-β-Naphtholazoterephthalic acid**, methyl ester (Kaufmann and Weissel), 1912, A., i, 865.
**β-Naphtholbenzylamine** and its salts and acyl derivatives (Betti and Torricelli), 1903, A., i, 480.
  action of aldehydes on (Betti and Foà), 1903, A., i, 511.
**β-Naphtholbenzylamine*iso*propylidenecarboxylic acid**, ethyl ester (Betti and Foà), 1903, A., i, 512.
**β-Naphtholbenzyl-cinnamylidene, -furfurylidene-, -*iso*-propylidene-, and salicylidene-amines** (Betti and Foà), 1903, A., i, 511.
**β-Naphtholbisazodi-phenyl- and -tolyl-2:2′-disulphonic acids and their barium salts** (Elbs and Wohlfahrt), 1903, A., i, 213.
**Naphtholcamphorides**, *α*- and *β*-, reaction for distinguishing between, by means of piperonaldehyde (Thiéry), 1907, A., ii, 723.
**1 Naphthol-2-carboxylic acid** and its derivatives, and the action of phosphorus pentachloride on (Anschütz, Weber, and Runkel), 1906, A., i, 508.
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**1-Naphthol-2-carboxylic acid**, 4-chloro- (Weil and Heerdt), 1911, A., i, 979.
**1-Naphthol-4-carboxylic acid**, and 2-amino-, and 2-nitro- (Heller and Ruhtenberg), 1912, A., i, 358.
**2-Naphthol-1-carboxylic acid** (Tymstra and Eggink), 1906, A., i, 179.
  and its ethyl ester (Lassar-Cohn and Löwenstein), 1908, A., i, 985.
**2-Naphthol-3-carboxylic acid**, condensation of, with benzaldehyde (Friedl), 1910, A., i, 741.

**2-Naphthol-3-carboxylic acid**, 2-thio- (Kalle & Co.), 1912, A., i, 209.

**Naphtholcarboxylic acids**, action of sodium amalgam on (Weil), 1911, A., i, 978.

**1-Naphthol-3:6-disulphonic acid**, 8-amino-, disazo-dyes from (Kalle & Co.), 1904, A., i, 1065.
 polyazo-dyes from (Schoellkopf, Hartford, & Hanna Co.), 1904, A., i, 954.

**1-Naphthol-3:7-disulphonic acid**, 6-amino-, disazo-dyes from (Oehler), 1905, A., i, 845.

**2-Naphthol-3:6-disulphonic acid**, 1-nitroso-, sodium salt (May), 1911, P., 141.

**β-Naphtholfurfurylcarbinylamine** and its hydrochloride (Betti and Torricelli), 1903, A., i, 481.

**β-Naphthol-*o*-hydroxybenzylamine** hydrochloride (Betti and Torricelli), 1903, A., i, 481.

**β-Naphtholmethylene-amine** and **-hydroxylamine**, dibenzoyl derivative (Betti), 1906, A., i, 654.

**Naphtholonaphthaphenoxazone** (Fischer and Hepp), 1903, A., i, 654.

**α-Naphtholphthalein**, a new indicator (Sörensen and Palitzsch), 1910, A., ii, 446.

**α-Naphtholresorcinolphthalein anhydride** and its acetyl derivative and methyl ether (Friedl, Weizmann, and Wyler), 1907, T., 1587.

**β-Naphtholsulphonate.** See Asaprol.

**1-Naphthol-3-sulphonic acid**, 5-amino-, preparation of (Cassella & Co.), 1908, A., i, 160.
 6-amino-, disazo-dyes from (Oehler), 1904, A., i, 809; 1905, A., i, 162.

**1-Naphthol-5-sulphonic acid**, 6-amino- (Kalle & Co.), 1911, A., i, 630.

**1-Naphthol-7-sulphonic acid**, 2:4-*di*nitro-, potassium salt. See Naphthol-yellow-S.
 2-nitro-4-amino-, diazo-derivative of, 2-nitro-, and its copper salt, and 2-amino-, and its sodium salt and oxazine dye derivative (Finger, Bretsch, and Zeh), 1909, A., i, 471.

**1-Naphthol-8-sulphonic acid**, cerium salts (Erdmann and Nieszytka), 1908, A., i, 622; (Erdmann and Wirth), 1908, A., ii, 695.

**1-Naphthol-8-sulphonic acid**, 5-amino- (Bucherer and Uhlmann), 1909, A., i, 788.

**2-Naphthol-6-sulphonic acid**, cerous salt (Morgan and Cahen), 1907, T., 476.

**2-Naphthol-8-sulphonic acid**, 1-bromo-, sodium salt (Smith), 1906, T., 1511; P., 236.

**Naphtholsulphonic acids**, amino-, affinity constants of, as determined by the aid of methyl-orange (Veley), 1907, T., 1246; P., 179.
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**α-Naphtholsulphonic acids**, constitution of colouring-matters derived from (Gattermann and Liebermann), 1912, A., i, 1038.

**β-Naphtholsulphonic acids**, sodium salts, mercury derivatives of (Aktien-Gesellschaft fur Anilin-Fabrikation), 1904, A., i, 132.

**β-Naphtholsulphonic acids**, 1-amino-, diazotisation of (Gesellschaft für Chemische Industrie in Basel), 1907, A., i, 987; (Kalle & Co.), 1908, A., i, 842.
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**Naphthol yellow-S** (Finger, Bretsch, and Zeh), 1909, A., i, 470.
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**3-Naphthonitrile**, 2:4-*di*nitro-1-hydroxy- (Borsche and Gahrtz), 1906, A., i, 957.

**β-Naphthoxazines** containing mixed aldehydic and ketonic radicles (Betti and Foà), 1903, A., i, 511.

**β-Naphthoxazinebenzylidenemethyleneamine** (Betti and Foà), 1903, A., i, 511.

**Naphthoxazoles**, α- and β-, and their derivatives (Fischer and Römer), 1906, A., i, 541.

**Naphthoxazone**, *di*amino-, and its **disulphonic acid** (Nietzki and Becker), 1907, A., i, 978.

**β-Naphthoxide**, cerium (Chemische Fabrik auf Aktien vorm. E. Schering), 1910, A., i, 164.
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**Naphthoxides,** α- and β-, sodium, reactions of, with naphthyl and guaiacyl esters of α-bromo-fatty acids (Bischoff, Gussew, Wielowieyski, and Willums), 1907, A., i, 34.

**1-Naphthoxyacetic acid,** 8-amino-, acetyl derivative, and its cupric salt (Fichter and Kühnel), 1910, A., i, 107.

**2-Naphthoxyacetic acid,** α-nitro-, preparation and reduction of (Lees and Shedden), 1903, T., 758; P., 132.

**1-Naphthoxyanthraquinones,** α- and β- (*erythroxyanthraquinone naphthyl ethers*) (Laube), 1906, A., i, 598; (Decker and Laube), 1906, A., i, 689.

**β-Naphthoxybenzoic acid** (Ullmann and Zlokasoff), 1905, A., i, 598; (Aktien-Gesellschaft für Anilin-Fabrikation), 1905, A., i, 780.

**α-Naphthoxy-*n*- and -*iso*-butyric, -propionic, and -*iso*valeric acids,** α- and β-, α- and β-naphthyl esters (Bischoff, Wielowieyski, and Willums), 1907, A., i, 35.

**5-Naphthoxy-2-ethylthiol-4-naphthoxymethyl-1:6-dihydro-6-pyrimidone** (Johnson and Hill), 1912, A., i, 913.

**2-Naphthoxyl chloride,** 3-hydroxy-, acetyl derivative, and amide and anilide (Anschütz and Graff), 1909, A., i, 665.

**2-β-Naphthoxy-5-methoxybenzoic acid** (Ullmann and Kipper), 1905, A., i, 596.

**5-Naphthoxy-4-naphthoxymethyltetrahydro-6-pyrimidone,** 2-thio- (Johnson and Hill), 1912, A., i, 913.

**α-1-Naphthoxypropane,** γ-chloro-β-hydroxy- (Marle), 1912, T., 317.

**Naphthoxythiophen** (Kalle & Co.), 1912, A., i, 208.

**β-Naphthoylacetic acid,** ethyl ester, and its hydrazone (Weizmann and Falkner), 1905, P., 307; 1906, T., 122.

**β-Naphthoylacetoacetic acid,** ethyl ester (Weizmann and Falkner), 1905, P., 307; 1906, T., 123.

**Naphthoylbenzoic acid,** isomeric methyl esters (Goldschmiedt and Lipschitz), 1905, A., i, 133.

**2-Naphthoylbenzoic acid,** 2′- and 4(5)-amino-, and 2′- and 4(5)-chloro- (Badische Anilin- & Soda-Fabrik), 1911, A., i, 885.
  β-hydroxy- (Bünzly and Decker), 1905, A., i, 884.

**2-α-Naphthoylbenzoic acid** (Pickles and Weizmann), 1904, P., 201.
  and its esters, anhydride, and acid amide (Graebe), 1905, A., i, 704.

**2-α-Naphthoylbenzoic acid,** 4-chloro- (Heller and Grünthal), 1912, A., i, 357.
  3:6-*di*- and 3:4:5:6-*tetra*-chloro-, and their methyl esters (Graebe and Peter), 1905, A., i, 704.

**2-β-Naphthoylbenzoic acid** and its chlorobromo-, hydroxybromo-, and hydroxynitro-derivatives (Orchardson and Weizmann), 1905, P., 307; 1906, T., 115.

**2-β-Naphthoylbenzoic acid,** 3(6)- and 4(5)-amino-, and -nitro-1′-hydroxy- (Bentley, Friedl, and Weizmann), 1907, T., 1590; P., 215.
  4′-amino-1′-hydroxy-, 4′-amino-1′:4-(or 5)-*di*hydroxy-, 6′(?)-bromo-1′:4-(or 5)-*di*hydroxy-, and 4(or 5):-1′- and 1′:5′-*di*hydroxy- (Bentley, Friedl, Thomas, and Weizmann), 1907, T., 416.
  3-chloro- (Heller and Grünthal), 1912, A., i, 357.
  4′-chloro-1′-hydroxy-, and *o*-4-nitroso-1-hydroxy-, and sodium salt of the latter (Anilinfarben & Extract-Fabriken vorm. J. R. Geigy), 1910, A., i, 745, 746.
  3:6-*di*chloro-1′-hydroxy-, 3:6-*di*chloro-4′-bromo-1′-hydroxy-, and 3:4:5:6-*tetra*chloro-1′-hydroxy-, and 3:4:5:6-*tetra*chloro-4′-bromo-1′-hydroxy-, and their sodium salts (Harrop, Norris, and Weizmann), 1909, T., 282.
  1-hydroxy-, and its esters, salts, and acetyl derivative (Deichler and Weizmann), 1903, A., i, 349.

**Naphthoylboric acid,** *tri*-α- and -β-hydroxy- (Cohn), 1911, A., i, 641.

**2-Naphthoylcyanoacetic acid,** 3-hydroxy-, acetyl derivative, ethyl ester (Anschütz and Graff), 1909, A., i, 665.

**β-Naphthoyldiethylacetic acid** (Freund and Fleischer), 1910, A., i, 491.

**Naphthoylnaphthoic acid,** hydroxy- (Fischer and Hoesch), 1912, A., i, 860.

**4-Naphthoyloxybenzoic acid,** α-hydroxy- (Fischer, Freudenberg, and Hoesch), 1911, A., i, 875; (Fischer and Hoesch), 1912, A., i, 859.

**α-Naphthoyltetrahydroquinoline** (v. Braun), 1905, A., i, 236.

**Naphthyl** ethers (Ullmann and Sponagel), 1907, A., i, 38.
  arsenite (Lang, Mackey, and Gortner), 1908, T., 1370; P., 151.

**α-Naphthyl** benzyl selenide (Taboury), 1906, A., i, 834.

- *α*-**Naphthyl** benzyl and methyl sulphides (Taboury), 1905, A., i, 57.
  - ethyl ether, 2-amino-, and its acetyl derivative (Noelting, Grandmougin, and Freimann), 1909, A., i, 442.
    - 4-bromo- and chloro-derivatives (Autenrieth and Mühlinghaus), 1907, A., i, 32.
    - 4-bromo-2-nitro- (Meldola and Lane), 1904, T., 1605.
    - 4:8-*di*nitro- (Graebe and Oser), 1905, A., i, 54.
  - magnesium bromide (Acree), 1904, A., i, 360.
    - action of selenium and of sulphur on (Taboury), 1903, A., i, 748.
  - mercaptan, 4-amino-, and its salts and derivatives (Zincke and Schütz), 1912, A., i, 257.
  - methyl ether, 2-amino-, and its acetyl derivative (Noelting, Grandmougin, and Freimann), 1909, A., i, 442.
    - 4-amino-, acetyl derivative, and 4-nitro- (Voroschtsoff), 1911, A., i, 341 ; 1912, A., i, 145.
    - 8-amino-, and its diazotisation and salts, and acetyl derivative and its bromo-compound (Fichter and Gageur), 1906, A., i, 841.
    - 5-nitro-8-amino-, 5-nitro-, and 8-amino-, acetyl derivative (Fichter and Kühnel), 1910, A., i, 108.
    - 4-nitroso- (Meisenheimer), 1907, A., i, 862.
  - methyl sulphide, 4-amino-, 3-bromo-, 3-chloro-, and their derivatives (Zincke and Schütz), 1912, A., i, 258.
  - *o*-nitrophenyl sulphide, 2-amino-, and its derivatives (Zincke and Farr), 1912, A., i, 764.
  - 2:4-*di*-*o*-nitrophenyl disulphide, 1-amino-, and its derivatives (Zincke and Farr), 1912, A., i, 764.
  - 2:2′-oxide and its picrates (Eckstein), 1905, A., i, 885.
  - trimethylene ether (Gattermann), 1908, A., i, 35.
- *β*-**Naphthyl** alcohol, 4-nitro-1-hydroxy-, methylene ether and methylene ether ester (Borsche and Berkhout), 1904, A., i, 416.
  - allyl ether (Claisen and Eisleb), 1912, A., i, 965.
  - arabinoside (Ryan and Ebrill), 1904, A., i, 223.
  - ethyl ether, *α*-amino-, compound of trinitrobenzene and (Sudborough and Beard), 1910, T., 787.
- *β*-**Naphthyl** methyl ether, 1-amino-, and its acetyl derivative, and 1:6-*di*nitro- (Charrier and Ferreri), 1912, A., i, 813.
    - 5-amino-, *N*-acetyl derivative of (Sachs, Appenzeller, Herold, Mylo, Schädel, and Sutter), 1906, A., i, 830.
    - 1-bromo- (Autenrieth and Mühlinghaus), 1907, A., i, 32.
    - hydroxy-. See Methoxynaphthol.
    - 1:6-*di*nitro- (Graebe), 1905, A., i, 54.
  - trimethylene ether and its dialdehyde (Gattermann), 1908, A., i, 35.
- **Naphthyl group,** migration of, in iodohydrins of the naphthalene series (Tiffeneau and Daudel), 1908, A., i, 972.
- *α*-**Naphthyl-acetone** and **-acetaldehyde,** and their semicarbazones (Tiffeneau and Daudel), 1908, A., i, 973.
- *α*-**Naphthylacetyl** chloride (Badische Anilin- & Soda-Fabrik), 1911, A., i, 464.
- *β*-**1-Naphthylacrylic acid,** 2-chloro-, and its salts and derivatives (Sachs and Brigl), 1911, A., i, 720.
- *β*-**2-Naphthylacrylic acid** (Gattermann), 1912, A., i, 985.
  - preparation of (Monier-Williams), 1906, T., 277 ; P., 22.
- *β*-**1-** and **-2-Naphthylacrylic acids,** *α*-amino-, benzoyl derivatives, and their lactimides (Kikkoji), 1911, A., ii, 909.
- *β*-**1-** and **-2-Naphthylalanines** and their derivatives (Kikkoji), 1911, A., ii, 910.
- **Naphthylallyl-carbamide** and **-thiocarbimide,** 8-amino- (Sachs), 1909, A., i, 432.
- *α*-**Naphthylamides** of fatty sulphonic acids, abnormality in melting points of (Duguet), 1906, A., i, 475.
- *α*-**Naphthylamine**, freezing points of mixtures of, with the dihydric phenols (Philip and Smith), 1905, T., 1735 ; P., 255.
  - condensation of, with aldehydes (Senier and Austin), 1907, T., 1233 ; P., 185.
  - condensation of, with benzylideneaniline (Mayer), 1904, A., i, 784.
  - interaction of, with nitrobenzene in presence of alkali (Wohl), 1904, A., i, 155.
  - compounds of *α*- and *β*-naphthol and (Dollinger), 1910, A., i, 701.

- α-**Naphthylamine**, *N*-acetyl derivative, 3:8-dibromo- and chloronitro- (Verda), 1903, A., i, 21.
  - *N*-acetyl and *N*-formyl derivatives, *N*-chloro- (Slosson), 1903, A., i, 476.
  - *N*-alkylated, derivatives of (Meldola), 1906, T., 1434 ; P., 245.
  - *o*-hydroxyazo-derivatives of (Badische Anilin- & Soda-Fabrik), 1905, A., i, 250.
  - hydrogen tartrate, rotatory power of (Minguin and Wohlgemuth), 1909, A., i, 11.
  - picrates (Suida), 1908, A., i, 523.
- 1-**Naphthylamine**, 4-bromo-, compound of trinitrobenzene and (Sudborough and Beard), 1910, T., 782.
  - hydrobromide of the acetyl derivative (Zincke and Schütz), 1912, A., i, 258.
  - 4-bromo-2-nitro-, diazotisation of (Meldola and Dale), 1906, P., 156.
  - 8-chloro-, and its **sulphonic acids** (Badische Anilin- & Soda-Fabrik), 1904, A., i, 396.
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  - 4-iodo- (Morgan and Godden), 1910, T., 1717.
  - 8-iodo-, and its hydrochloride (Scholl, Seer, and Weitzenböck), 1910, A., i, 616.
  - 5-nitro-, and its acetyl and formyl derivatives, and 4:5-*di*nitro- (Badische Anilin- & Soda-Fabrik), 1904, A., i, 154.
  - 5- and 8-nitro-, preparation of (Morgan and Micklethwait), 1906, T., 7.
- β-**Naphthylamine** and its derivatives, conversion of, into β-naphthol and its derivatives (Badische Anilin- & Soda-Fabrik), 1903, A., i, 480.
  - aryl-substituted, preparation of, by the sulphite method (Bucherer and Stohmann), 1904, A., i, 395 ; 1905, A., i, 585.
  - condensation of, with aldehydes and ketones (Rothenfusser), 1908, A., i, 52.
  - chloro-*N*-acetyl (Johnson), 1903, A., i, 580.
  - *N*-formyl derivative, *N*-chloro- (Slosson), 1903, A., i, 476.
- 2-**Naphthylamine**, 1-bromo-, and 1:6-*di*bromo-, compounds of trinitrobenzene and (Sudborough and Beard), 1910, T., 782.
- 2-**Naphthylamine**, 1-bromo- and 1-chloro-, condensation of, with methylene chloride (Senier and Austin), 1907, P., 300 ; 1908, T., 63.
  - α-nitro-, compound of trinitrobenzene and (Sudborough and Beard), 1910, T., 785.
- **Naphthylamines**, cryoscopy of (Buguet), 1910, A., ii, 826.
  - acetylation of some (Cybulsky), 1903, A., i, 775.
  - condensation of, with nitro-derivatives of benzyl chloride (Darier and Mannassewitch), 1903, A., i, 82.
  - compounds of, with nickel thiocyanate (Grossmann and Schück), 1906, A., i, 630.
  - compounds of, with trinitrobenzene and the influence of substituents on (Sudborough and Picton), 1906, T., 583 ; P., 84.
  - alkylated, compounds of, with *s*-trinitrobenzene (Hibbert and Sudborough), 1903, T., 1334 ; P., 225.
  - arylated, behaviour of, with formaldehyde and with nitrous acid (Bucherer and Seyde), 1907, A., i, 344.
  - diazoamino-compounds from (Vignon and Simonet), 1905, A., i, 397.
  - preparation of derivatives of (Le Sueur), 1911, T., 827 ; P., 104.
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  - salts of (Hilditch), 1911, T., 236.
  - telluri-haloids of (Gutbier, Flury, and Ewald), 1912, A., i, 689.
- α-**Naphthylamine-2-azobenzene-4′-sulphonic acid**, 4-bromo-, and its reduction (Morgan, Micklethwait, and Winfield), 1904, T., 752.
- 1-**Naphthylamine-4:7-disulphonic acid**, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 240.
- α-**Naphthylaminesulphonic acid**, 2:4-*di*chloro-, and its salts, and an *o*-hydroxyazo-dye from (Badische Anilin- & Soda-Fabrik), 1904, A., i, 953.
- α-**Naphthylamine-2-sulphonic acid** (Ruyter de Wildt), 1904, A., i, 572.
  - solubility of, in water (Doliński), 1905, A., i, 524.
- 1-**Naphthylamine-4-sulphonic acid** (*naphthionic acid*), solubility of, in water (Doliński), 1905, A., i, 524.
  - acylation of (Schroeter and Rösing), 1906, A., i, 416.
  - cerous salt (Morgan and Cahen), 1907, T., 477.

**1-Naphthylamine-8-sulphonic acid**, action of phosphorus oxychloride on (Dannerth), 1907, A., i, 909.

**Naphthylaminesulphonic acids**, azo-compounds from (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 207; (Badische Anilin- & Soda-Fabrik), 1904, A., i, 459.

**α-Naphthylaminesulphonic acids**, constitution of colouring-matters derived from (Gattermann and Liebermann), 1912, A., i, 1038.

**1-Naphthylamine-2:4:7-trisulphonic acid**, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 240.

**2-Naphthylamine-3:6:8-trisulphonic acid**, preparation of (Kalle & Co.), 1907, A., i, 313.

**β-Naphthylaminoacetamide** (Lumière and Perrin), 1903, A., i, 832.

**Naphthylaminoacetonitriles, α- and β-**, and the phenyl derivative of the α-compound (Knoevenagel, Schleussner, and Klucke), 1904, A., i, 989.

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**1-Naphthylamino-1-anthraquinone-2-carboxyl** chloride (Badische Anilin- & Soda-Fabrik), 1911, A., i, 980.

**1-Naphthylamino-1-anthraquinone-2-carboxylic acid** (Badische Anilin- & Soda-Fabrik), 1911, A., i, 980.

**1-β-Naphthylaminoanthraquinone-2-carboxylic acid**, and nitro-, and their salts (Badische Anilin- & Soda-Fabrik), 1912, A., i, 980.

**2-α- and -β-Naphthylaminobenzophenones**, 3:5-*di*nitro- (Ullmann and Broido), 1906, A., i, 189.

**β-Naphthylaminobenzylacetophenone** (Mayer), 1905, A., i, 215.

**ββ-Naphthylaminobenzylacetylacetone** (Ruhemann and Watson), 1904, T., 1175; P., 175.

**Naphthylamino*iso*butyronitriles** and their amides, α- and β- (Bucherer and Grolée), 1906, A., i, 350.

**α-Naphthylaminochlorophenylphenazonium** nitrate (Balls, Hewitt, and Newman), 1912, T., 1850.

**α-1- and -2-Naphthyl-*o*-aminocinnamic acids** (Weitzenböck and Lieb), 1912, A., i, 548.

**2-β-Naphthylaminodihydro-6-pyrimidone** (Johnson, Storey, and McCollum), 1908, A., i, 838.

**α-Naphthylaminodinaphthaxanthen** (Robyn), 1905, A., i, 608.

**Naphthylaminodiphenylguanidines**, α- and β- (Busch and Brandt), 1907, A., i, 260.

**α-Naphthylaminoethyl** cyanide (Maron), 1903, A., i, 826.

**6-β-Naphthylamino-3-methoxybenzoic acid** (Ullmann and Kipper), 1905, A., i, 597.

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α- and **β-Naphthylaminomethyleneacetoacetic acids**, ethyl esters of (Dains and Brown), 1909, A., i, 781.

α- and **β-Naphthylaminomethyleneacetoacetyl-α- and -β-naphthylamide** and dibromide of α-compound (Dains and Brown), 1909, A., i, 781.

α- and **β-Naphthylaminomethyleneacetylacetone** (Dains and Brown), 1909, A., i, 782.

**β-Naphthylaminomethylenebenzyl** cyanide (Dains and Brown), 1909, A., i, 782.

**β-Naphthylamino-*d*-methylenecamphor** (Pope and Read), 1909, T., 178; P., 19.

α- and **β-Naphthylaminomethylenecyanoacetic acids**, ethyl esters (Dains and Brown), 1909, A., i, 782.

**α-Naphthylaminomethylenedeoxybenzoin** (Dains and Brown), 1909, A., i, 782.

**4-β-Naphthylaminomethylene-1:3-diphenyl-5-pyrazolone** (Dains and Brown), 1909, A., i, 782.

α- and **β-Naphthylaminomethylenemalonic acid**, α- and β-naphthylamides of the ethyl esters of, bromo-derivative of the α-compound, and anilide (Dains and Brown), 1909, A., i, 781.

**4-α- and -β-Naphthylaminomethylene-1-phenyl-3-methyl-5-pyrazolone** (Dains and Brown), 1909, A., i, 782.

**α-Naphthyl aminomethyl ketone** platinichloride (Lister and Robinson), 1912, T., 1308.

**Naphthyl*di*aminonaphthaphenazine**, amino- (Nietzki), 1904, A., i, 1063.

**α-2-β-Naphthylaminonaphthyldi-β-naphthylamine.** See Tri-β-naphthyl-1:2-naphthylenediamine.

**5-α-Naphthylamino-1-β-naphthyl-3-methylpyrazole** (Michaelis and Danzfuss), 1905, A., i, 481.

**2-Naphthylamino-3:5-*di*nitrobenzoic acids**, α- and β- (Purgotti and Lunini), 1904, A., i, 316.

**α-1-Naphthylaminopalmitic acid** (Le Sueur), 1911, T., 832.

**α-2-Naphthylaminopalmitic acid** (Le Sueur), 1911, T., 829.

β-**Naphthylaminophenylacetic acid** and amide (Bucherer and Grolée), 1906, A., i, 351.

**Naphthylaminophenyl***di***nitro-***m***-phenylenediamine** and its **tetra-aminobenzene** derivative (Nietzki and Vollenbruck), 1904, A., i, 1063.

**Naphthylaminopinacolin** and its oxime (Wiechowski), 1905, A., i, 708.

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α-**1-Naphthylaminostearic acid** (Le Sueur), 1911, T., 831; P., 104.

α-**2-Naphthylaminostearic acid** (Le Sueur), 1911, T., 828.

β-**Naphthylaminosuccino-**β-**naphthylimide** and nitroso- (Warren and Grose), 1912, A., i, 961.

**1-**β-**Naphthylamino-4-***p***-tolylthiolanthraquinone-2-carboxylic acid** (Badische Anilin- & Soda-Fabrik), 1912, A., i, 980.

α- and β-**Naphthylammonium** osmichloride (Gutbier and Walbinger), 1911, A., i, 191.
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**Naphthylaniline-2-carboxylic acids,** α- and β- (*naphthylanthranilic acids*) (Ullmann and Rasetti), 1907, A., i, 846.
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α- and β-**Naphthylanthramine** (Padova), 1909, A., i, 655.

**Naphthyl anthraquinonyl ketone** (Scholl), 1912, A., i, 196.

**Naphthylarsinic acid,** amino- and hydroxy- (O. and R. Adler), 1908, A., i, 492.
  4-hydroxy- (α-*naphtholarsinic acid*), preparation, and sodium salt of (Adler), 1909, A., i, 448.

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**Naphthylazoacetoacetic acids,** α- and β-, ethyl esters, benzoylhydrazones of (Bülow and Schaub), 1908, A., i, 705.

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**Naphthyl-4-azoimide,** benzoyl-1-amino- (Morgan and Couzens), 1910, T., 1697.

**Naphthylazoimides,** α- and β-, and their nitro-derivatives (Forster and Fierz), 1907, T., 1942; P., 258.

α-**Naphthylazo-**α-**naphthylhydrazinesulphonic acid** (Tröger and Westerkamp), 1910, A., i, 209.

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α-**Naphthylbenzoin,** synthesis of (Acree), 1904, A., i, 743.

**Naphthyl-2-benzotriazole,** 4-hydroxy- (Elbs and Keiper), 1903, A., i, 662.

α-**Naphthyl benzoylaminomethyl ketone** (Lister and Robinson), 1912, T., 1307.

**1-**β-**Naphthylbenzsulphontriazine** (Ullmann and Gross), 1910, A., i, 887.

α-**Naphthylbenzylamine** and its hydrochloride (Busch and Leefhelm), 1908, A., i, 152.

β-**Naphthylbenzylamine,** aldehydic derivatives, relation between chemical constitution and rotatory power of (Betti), 1907, A., ii, 726.

β-**Naphthyl-**ψ-**benzylthiocarbamide,** cyano- (Fromm and Weller), 1908, A., i, 703.

β-**Naphthyl-***di*- and -*tri*-**bromomethylsulphones** (Tröger and Hille), 1905, A., i, 337.

β-**Naphthyl***iso***butylene** (Behrend and Klinckhard), 1911, A., i, 294.

α- and β-**Naphthyl** *tert.*-**butyl ketones,** and their derivatives (Volmar), 1910, A., i, 393.

β-**Naphthylbutyrolactone** (Behrend, Ludewig, and Klinckhard), 1911, A., i, 289.

β-**Naphthylcamphoformeneamine** and its **carboxylic acid,** β-naphthylamine salt (Tingle and Hoffman), 1905, A., i, 799.

α-**Naphthylcamphoformeneaminecarboxylic acid,** α-naphthylamine salt (Tingle and Hoffman), 1905, A., i, 799.

α-**Naphthylcarbamic acid,** esters of (Neuberg and Kansky), 1909, A., i, 690; (Neuberg and Hirschberg), 1910, A., i, 694.

β-**Naphthylcarbamic hydrazide** and its hydrochloride and acetophenone and *o*-hydroxybenzylidene compounds (Borsche), 1905, A., i, 306.

**α-Naphthylcarbamidoacetaldehyde** (Neuberg and Hirschberg), 1910, A., i, 694.
*s*-**1-Naphthylcarbamido-1:3:4-triazole** (Bülow), 1909, A., i, 681.
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**α-Naphthylcarbimide,** reactions of, with amino-acids (Neuberg and Manasse), 1905, A., i, 647.
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**α-Naphthylcinchotoxol** (Comanducci and Melone), 1909, A., i, 409.
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**β-Naphthyl*iso*crotonic acid** (Behrend, Ludewig, and Klinckhard), 1911, A., i, 289.
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**α-Naphthyldiguanide** and its salts (Cohn), 1911, A., i, 929.
**α-Naphthyldihydrocarvone** and its oxime (Szelinski), 1909, A., i, 246.
**α-Naphthyldimethylamine,** 2:4-*di*nitro- (Ullmann and Bruck), 1909, A., i, 22.
**β-Naphthyldi-methyl-** and **-ethyl-amine** *d*-camphorsulphonates, rotation of (Reychler), 1903, A., i, 24.
**α-Naphthyldimethylcarbinol** (Schurakovsky), 1910, A., i, 169.
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*o*-**Naphthylenebis-1-aminoanthraquinone** (Laubé and König), 1909, A., i, 55.
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**1:3-Naphthylenediamine** and its derivatives, formation of, from *o*-toluonitrile (Atkinson, Ingham, and Thorpe), 1907, T., 578; P., 76.
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  *N*-dibenzoyl derivative, and its isomeride (Wohl and Goldenberg), 1904, A., i, 209.
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**1:5-Naphthylenediaminedicrotonic acid**, ethyl ester (Finger and Spitz), 1909, A., i, 523.

**1:3-Naphthylenediamine-5-sulphonic acid** (Dannerth), 1907, A., i, 910.

**1:3-Naphthylenediamine-6-sulphonic acid** and its dithiocarbamide (Kalle & Co.), 1903, A., i, 555.

**1:5-Naphthylenediamine-4-sulphonic acid**, 5-acetyl derivative (Bucherer and Uhlmann), 1909, A., i, 787.

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**1:2-Naphthylenediazoimines**, two isomerides, and their benzenesulphonyl derivatives (Morgan and Godden), 1912, T., 1702; P., 165.

**Naphthylene-1:8-dibenzylideneimine**, 2:7-*di*hydroxy-, and its salts, and triacetyl, and tribenzyl derivatives (Beschke, Rölle, and Strum), 1909, A., i, 962.

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**Naphthylene-1:8-difurfurylideneimine**, 2:7-*di*hydroxy-, and its salts, triacetyl and tribenzoyl derivatives (Beschke, Rölle, and Strum), 1909, A., i, 963.

**2:3-Naphthylenedihydrazine** and its derivatives (Franzen), 1907, A., i, 880.
  and its benzylidene derivative and hydrochloride (Franzen), 1905, A., i, 244.

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**2:3-Naphthylenedi-3-phenylpyrazolone** and its di-isonitroso-derivative (Franzen), 1907, A., i, 882.

α- and **β-Naphthylene-*p*-tolylene oxides** (Sabatier and Mailhe), 1912, A., i, 767.

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**α-Naphthylethylene** (Tiffeneau and Daudel), 1908, A., i, 973.

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**9-α-Naphthylfluorene** and its **alcohol** (Ullmann and v. Wurstemberger), 1906, A., i, 77.

**α-Naphthyl heptadecyl ketone** (Ryan and Nolan), 1912, A., i, 750.

**α-Naphthylhydantoic acid** (Neuberg and Federer), 1906, A., i, 806.

**1-Naphthylhydrazine**, αβ-dibenzoyl derivative (Wohl and Goldenberg), 1904, A., i, 209.

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**2-Naphthylhydrazine**, 7-amino-, and 7-hydroxy-, and their benzylidene derivatives (Franzen and Deibel), 1908, A., i, 832.

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**β-Naphthylhydrazone**, use of, for the detection and separation of the sugars (Hilger and Rothenfusser), 1903, A., ii, 187.

**1-α-Naphthylhydrocotarnine** and its hydrobromide (Freund and Reitz), 1906, A., i, 601.

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**α-Naphthylideneacetylacetone**, β-hydroxy- (Knoevenagel and Schröder), 1905, A., i, 64.

**Naphthylideneamines** (Senier and Clarke), 1911, T., 2081; P., 260.

**α-Naphthylidene-*p*-aminobenzoic acid**, 2-hydroxy-, and its ethyl ether (Manchot and Palmberg), 1912, A., i, 350.

**α-Naphthylidene-*o*-, -*m*-,** and **-*p*-aminobenzoic acids**, 2-hydroxy- (Senier and Clarke), 1911, T., 2083.

**α-Naphthylidene-*p*-aminophenol**, 2-hydroxy- (Manchot and Palmberg), 1912, A., i, 349.

**α-Naphthylidene-*o*-, -*m*-,** and **-*p*-aminophenols**, 2-hydroxy- (Senier and Clarke), 1911, T., 2082.

α-**Naphthylideneaniline**, 2-hydroxy- (Manchot and Palmberg), 1912, A., i, 350.

β-**Naphthylideneaniline** (Monier-Williams), 1906, T., 276; (Gattermann), 1912, A., i, 985.

α-**Naphthylidene-*p*-anisidine**, 2-hydroxy- (Manchot and Palmberg), 1912, A., i, 350.

α-**Naphthylidene-*o*-, -*m*-, and -*p*-anisidines**, 2-hydroxy- (Senier and Clarke), 1911, T., 2083.

**Naphthylidenebisphenylmethylpyrazolone**, β-hydroxy- (Betti and Mundici), 1906, A., i, 544.

α-**Naphthylidene-*o*-, -*m*-, and -*p*-bromoaniline**, 2-hydroxy- (Senier and Clarke), 1911, T., 2082.

α-**Naphthylidene-*o*-, -*m*-, and -*p*-chloroaniline**, 2-hydroxy- (Senier and Clarke), 1911, T., 2081.

α-**Naphthylidene-ψ-cumidine**, 2-hydroxy- (Senier and Clarke), 1911, T., 2084.

α-**Naphthylidene-α- and -β-naphthylamines**, 2-hydroxy- (Bartsch), 1903, A., i, 649; (Manchot and Palmberg), 1912, A., i, 350.

α-**Naphthylidene-*m*-nitroaniline**, 2-hydroxy- (Senier and Clarke), 1911, T., 2082.

**Naphthylidene-*p*-nitroaniline**, β-hydroxy- (Betti and Mundici), 1905, A., i, 213.

α-**Naphthylidene-*m*-toluidine**, 2-hydroxy- (Senier and Shepheard), 1909, T., 1954.

α-**Naphthylidene-*o*-4-, -*m*-4-, and -*p*-xylidine**, 2-hydroxy- (Senier and Clarke), 1911, T., 2084.

**2:5-β-Naphthylimino-1-β-naphthyl-2:3-dimethylpyrazole** (1-β-*naphthyl*-2:5-*naphthyliminopyrine*) and its derivatives (Michaelis and Danzfuss), 1905, A., i, 481.

**4-β-Naphthylimino-3-β-naphthylquinazoline-2-carboxylic acid**, ethyl ester (Bogert and Gortner), 1910, A., i, 284.

**2:5-Naphthylimino-1-phenyl-2:3-dimethylpyrazoles**, α- and β- (2:5-*naphthyliminopyrines*) and their additive salts (Michaelis and Hepner), 1905, A., i, 480.

**2:5-Naphthyliminopyrines.** See 2:5-Naphthylimino-1-phenyl-2:3-dimethylpyrazoles.

β-**Naphthylitamalic acid** (Behrend, Ludewig, and Klinckhard), 1911, A., i, 288.

α-**Naphthyl ketones**, preparation of, free from the β-isomerides (Caille), 1911, A., i, 792.

**Naphthyl-malachite-green** (Zsuffa), 1910, A., i, 862.

α(?)-**Naphthyl-4-methoxyphenylacetic acid**, 2-hydroxy- (Bistrzycki, Paulus, and Perrin), 1911, A., i, 868.

α-**Naphthylmethyl bromide** (Schmidlin and Massini), 1909, A., i, 562.
  chloride (Wislicenus and Wren), 1905, A., i, 284.

α-**Naphthylmethylamine**, 8-hydroxy-, *N*-acyl derivatives of (Einhorn, Bischkopff, Szelinski, and Ladisch), 1906, A., i, 247.

β-**Naphthylmethylamine** and its salts (Pschorr and Karo), 1906, A., i, 886.

β-**Naphthylmethylaminoacetonitrile** (v. Braun), 1908, A., i, 628.

**1-Naphthyl-2-methylbenziminazoles**, α- and β-, 4:7-*di*nitro-6-hydroxy-, synthesis of (Meldola), 1906, T., 1942.

**Naphthyl-β-methyl*iso*crotonic acid** (Behrend and Klinckhard), 1911, A., i, 294.

**3-α-Naphthyl-2-methyl-4-dihydroquinazolone**, 7-amino-, acetyl derivative (Bogert, Amend, and Chambers), 1910, A., i, 895.

**3-α- and -β-Naphthyl-2-methyl-4-dihydroquinazolones**, and their methiodides (Bogert and Geiger), 1912, A., i, 396, 511.

β-**Naphthylmethylethylamine** *d*-camphorsulphonate, rotation of (Reychler), 1903, A., i, 23.

γ-β-**Naphthylmethylethylamine oxide** and its derivatives (Meisenheimer and Hoffheinz), 1912, A., i, 25.

β-**Naphthylmethylethylammonium hydroxide**, *d*- and *l*-hydroxy-, and their salts (Meisenheimer and Hoffheinz), 1912, A., i, 25.

β-**1- and -2-Naphthyl-β-methylglycidic acids** and their ethyl esters (Darzens), 1908, A., i, 91.

α-**Naphthylmethylglycollic acid** (Grignard), 1903, A., i, 31.

γ-(α- and β-)**Naphthyl-γ-methylitaconic acid** (Stobbe and Lenzner), 1911, A., i, 379.

α-**Naphthyl methyl ketone** semicarbazone (Scholtz and Meyer), 1910, A., i, 562.

β-**Naphthyl methyl ketone**, 1-hydroxy- (2-*acetyl-α-naphthol*) (Torrey and Cardarelli), 1911, A., i, 67.
  and its bromo-derivative, phenylhydrazones of (Torrey and Brewster), 1910, A., i, 48.

**Naphthyl methyl ketones**, α- and β-, semicarbazones of (Darzens), 1908, A., i, 91.

**Naphthylmethylparaconic acids**, isomeric (Behrend and Klinckhard), 1911, A., i, 294.

α-**Naphthyl-β-methyl-$\Delta^{\alpha\gamma}$-pentadiene** (Bjelouss), 1912, A., i, 230.

β-**Naphthylmethylpyrazole**, chloro-, methochloride of (Michaelis and Danzfuss), 1905, A., i, 481.

β-**Naphthyl-3-methylpyrazolone**, 7′-hydroxy- (Franzen and Deibel), 1908, A., i, 832.

β-**Naphthyl-3-methyl-5-pyrazolone-7′-sulphonic acid**, 5′-hydroxy-, and its nitroso-derivative (Aktien-Gesellschaft für Anilin-Fabrikation), 1911, A., i, 687.

1-**Naphthyl-2-methylpyrrolidone-2-carboxylic acids**, α- and β-, and their esters, amides, aminoximes, and nitriles (Kühling and Falk), 1905, A., i, 372.

1-**Naphthylmethylsulphone**, 4-amino-, and its hydrochloride (Zincke and Schütz), 1912, A., i, 258.

**Naphthylnaphthalimides**, α- and β- (Bargellini), 1905, A., i, 211.

α-**Naphthyl-nitroacetamide** and -*iso***nitroacetonitrile** and its sodium derivative (Wislicenus and Wren), 1905, A., i, 284.

α-1- and -2-**Naphthyl-*o*-nitrocinnamic acids** (Weitzenböck and Lieb), 1912, A., i, 548.

**Naphthylnitromethanes**, α- and β- (Wislicenus and Wren), 1905, A., i, 284.

α-**Naphthylnitrosoamine**, 4-amino-, *N*-benzoyl derivative of (Morgan and Wootton), 1907, T., 1322.

α-**Naphthyloxamic acid**, 3-hydroxy-, and its ethyl ester and amide (Meyer and Wolfsleben), 1911, A., i, 631.

α-**Naphthyl oximinomethyl ketone** (Lister and Robinson), 1912, T., 1307.

β-**Naphthylparaconic acid** (Behrend, Ludewig, and Klinckhard), 1911, A., i, 288.

α-**Naphthyl pentadecyl ketone** (Ryan and Nolan), 1912, A., i, 749.

α-1-**Naphthylpentan-γ-one**, 2-chloro- (Sachs and Brigl), 1911, A., i, 720.

α-1-**Naphthyl-pentan-γ-one-α-ol**, 2-chloro- (Sachs and Brigl), 1911, A., i, 720.

α-1-**Naphthyl-$\Delta^{\alpha}$-penten-γ-one**, 2-chloro-, and its semicarbazone (Sachs and Brigl), 1911, A., i, 720.

β-**Naphthylphenylformazylbenzene** (Fichter and Fröhlich), 1903, A., i, 723.

*N*-α-**Naphthylphthalamic acid**, 3-hydroxy- (Meyer and Wolfsleben), 1911, A., i, 631.

β-**Naphthylphthalamic acid**, intramolecular condensation of (Tingle and Lovelace), 1907, A., i, 1045.
  benzylamine salt (Tingle and Brenton), 1909, A., i, 799.

α-1- and -2-**Naphthylpropaldehydes** and their semicarbazones (Darzens), 1908, A., i, 91.

α-**Naphthylpropenylcarbinol** (Schurakovsky), 1910, A., i, 169.

α-1-**Naphthylpropionic acid** (Tiffeneau and Daudel), 1908, A., i, 973.

β-2-**Naphthylpropionic acid** (Gattermann), 1912, A., i, 985.
  preparation of (Monier-Williams), 1906, T., 277.

**Naphthylpropylenes**, α- and β- (Tiffeneau and Daudel), 1908, A., i, 972.

β-**Naphthyl propyl ketone**, crystallography of (Bargellini and Melacini), 1908, A., i, 775; (Rosati), 1909, A., i, 241.

**Naphthylpyridinium**, *di*nitro-, preparation of derivatives of (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 696.

**Naphthylpyrroles**, 1-α- and -β-, and 2-β- (Pictet and Long), 1904, A., i, 772.

β-**Naphthylpyruvic acid** (Kikkoji), 1911, A., ii, 910.

3-**Naphthylrhodanic acids**, α- and β-, and their 5-benzylidene and 5-furfurylidene derivatives (Wagner), 1907, A., i, 233.

β-**Naphthylsemicarbazide**, 7-hydroxy- (Franzen and Deibel), 1908, A., i, 832.

3-α- and -β-**Naphthyl-2-styryl-4-dihydroquinazolone** (Bogert and Beal), 1912, A., i, 394.

β-**Naphthylsuccinamic acid**, ethyl ester (Meyer and v. Lutzan), 1906, A., i, 765.

1-**Naphthylsulphamin-4:7-disulphonic acid**, sodium and ammonium salts (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 240.

1-**Naphthylsulphamin-2:4:7-trisulphonic acid**, salts of (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 240.

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β-**Naphthyltartramic acid** and its aniline salt and β-naphthylamide (Tingle and Bates), 1909, A., i, 910.

**β-Naphthyl-thio-** and -*di*thio-**carbamic acids,** esters (Roschdestvensky), 1910, A., i, 107.
**Naphthyl*di*thiocarbaminacetic acid,** α- and β-, ethyl esters (Wagner), 1907, A., i, 234.
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**β-Naphthyl-ψ-thiohydantoic acid** (Johnson), 1903, A., i, 580.
**β-Naphthyl-ψ-thiohydantoins,** labile and stable (Johnson), 1903, A., i, 580.
**α-Naphthylthiolacetic acid,** preparation of (Kalle & Co.), 1908, A., i, 605.
α- and **β-Naphthylthiolacetic acids,** and amino-, lactam, and cyano- (Kalle & Co.), 1912, A., i, 208; (Friedländer, Voroschtsoff, and Eckstein), 1912, A., i, 295.
**4-α-Naphthylthiolanthraquinone,** 1-amino- (Gattermann), 1912, A., i, 1002.
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*o*-**β-Naphthylthiolbenzoic acid,** new preparation of (Goldberg), 1905, A., i, 59.
**β-Naphthyl-thiuret** hydrochloride and -*di*thiobiuret (Fromm and Weller), 1908, A., i, 703.
**α-Naphthyl-*p*-tolylethylene** (Schurakovsky), 1910, A., i, 169.
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**Narcotine,** constitution of (Freund and Becker), 1903, A., i, 572; (Rabe and McMillan), 1911, A., i, 77.
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*n*-**Noninoic acid** (*n-hexylpropiolic acid*) and its amide and nitrile (Moureu and Lazennec), 1906, A., i, 148.
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*n*-**Nonoylalanine**, α-amino-, and α-bromo- (Hopwood and Weizmann), 1911, T., 1580.

*n*-**Nonoylasparagine**, α-amino-, and α-bromo- (Hopwood and Weizmann), 1911, T., 1583.

*n*-**Nonoylaspartic acid**, α-amino-, and α-bromo- (Hopwood and Weizmann), 1911, T., 1584.

*n*-**Nonoylglycine**, α-amino-, and α-bromo- (Hopwood and Weizmann), 1910, P., 69 ; 1911, T., 1578 ; P., 214.
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*n*-**Nonoylvaline**, α-amino-, and α-bromo- (Hopwood and Weizmann), 1911, T., 1581.

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*n*-**Nonyl alcohol**, formation of (Guerbet), 1903, A., i, 61.

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*as*-**Oxalyldiphenylguanidine** (Dieckmann and Kämmerer), 1907, A., i, 979.

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*a*-**Oxalylglutaric acid,** ethyl ester (Gault), 1909, A., i, 362.

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*iso***Pentane,** αβ-*di*bromo- (Faworsky and Kutscheroff), 1907, A., i, 743.

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*iso***Pentane,** ββ-*di*chloro-αδ-*di*hydroxy- (Smirnoff), 1905, A., i, 173.

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*iso***Pentanes,** bromo-, equilibrium isomerism on heating (Faworsky and Fritzmann), 1907, A., i, 741.

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*spiro***Pentane** (*vinyltrimethylene*) (Fecht), 1907, A., i, 906.

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*cyclo***Pentanealdehyde** and its semicarbazone (Wallach), 1906, A., i, 564.

*cyclo***Pentanecarboxylic acid** and its amide (Zelinsky), 1908, A., i, 729.

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*cyclo***Pentane-1-carboxylic acid,** 1-amino-, preparation of, and its copper salt (Zelinsky), 1911, A., i, 974.

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*cyclo***Pentane-1:3-dicarboxylic acid**, 2-imino-, ethyl ester (Mitchell and Thorpe), 1910, T., 1002; P., 114.

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*iso***Pentane-αδ-diol**, derivatives of (Harries and Neresheimer), 1911, A., i, 798.
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*cyclo***Pentane-2:5-dione-1:1-dicarboxylic acid**, ethyl ester, and its pyrazolone derivative (Scheiber), 1909, A., i, 363.

*cyclo***Pentane-4:5-dione-1:2-dicarboxylic acid**, ethyl ester, and its derivatives (Gault), 1910, A., i, 487.

*cyclo***Pentanediphenyldisulphones** (Posner and Tscharno), 1905, A., i, 279.

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*cyclo***Pentanemethylamine** and its additive salts (Wallach and Fleischer), 1907, A., i, 618.

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*cyclo***Pentanesulphonic acid**, potassium salt and anilide of (Borsche and Lange), 1907, A., i, 599.

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*cyclo***Pentane-1:1:2:2-tetracarboxylic acid**, ethyl ester (Kötz and Spiess), 1903, A., i, 742.

*cyclo***Pentane-1:1:3:3-tetracarboxylic acid**, ethyl ester (Thole and Thorpe), 1911, T., 2186.

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**Pentane-αγε-tricarboxylic acid** and γ-cyano-, ethyl esters (Perkin), 1904, T., 417; P., 51.
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*iso***Pentane-αβδ-tricarboxylic acid** and its ethyl ester and β-cyano-, ethyl ester (Hope and Perkin), 1910, P., 178; 1911, T., 762; P., 95.

*iso***Pentane-αδδ-tricarboxylic acid**, synthesis of (Noyes and Cox), 1904, A., i, 10.

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*iso***Pentan-γ-ol**, synthesis of (Henry), 1907, A., i, 744.

*cyclo***Pentan-1-olacetic acid** and its silver salt (Harding and Haworth), 1910, T., 492.

*cyclo***Pentanol*****iso*****butyric acid**, ethyl ester (Wallach and Fleischer), 1907, A., i, 618.

*cyclo***Pentan-1-ol-1-carboxylic acid**, methyl ester (Meerwein and Unkel), 1910, A., i, 857.

*cyclo***Pentan-1-ol-α-propionic acid** and its ethyl ester (Wallach and v. Martius), 1909, A., i, 384.

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*iso***Pentan-γ-one**, β-hydroxylamino-, and its oxime and derivatives, and β-hydroxy-, oxime, and β-nitrosohydroxylamino-, oxime (Cusmano), 1911, A., i, 186.

*cyclo***Pentanone**, preparation of (Holleman, van der Laan, and Slyper), 1905, A., i, 444.

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*cyclo***Pentanone-2-carboxylic acid**, ethyl ester, preparation of (Bouveault and Locquin), 1908, A., i, 393; (Dobson, Ferns, and Perkin), 1909, T., 2015.

*cyclo***Pentanone-2-carboxylic acid**, 5-cyano-, ethyl ester, and its methoxy-, potassium, and silver derivatives, and ethylation of (Best and Thorpe), 1909, T., 701; P., 92.

*cyclo***Pentanone-3-carboxylic acid**, ethyl ester, and the action of magnesium methyl iodide on (Haworth and Perkin), 1908, T., 591.

*cyclo***Pentanone-4-carboxylic acid**, preparation of, and its oxime and semicarbazone (Kay and Perkin), 1906, T., 1640; P., 270.

*cyclo***Pentan-1-one-2:5-dicarbanilide** (Mitchell and Thorpe), 1910, T., 1003.

*cyclo***Pentanone-2:4-dicarboxylic acid**, ethyl ester, formation of (Kay and Perkin), 1906, T., 1645; P., 270.

*cyclo***Pentanone-2:5-dicarboxylic acid**, ethyl ester (Mitchell and Thorpe), 1910, T., 1003.

*cyclo***Pentanone-2:5-dioxalic acid** and its ethyl ester (Ruhemann), 1912, T., 1732.

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*cyclo***Pentanylcarbinol** and its phenylcarbamate and corresponding aldehyde (Zelinsky), 1908, A., i, 727.

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*cyclo***Pentene**, *octa*chloro- (Henle), 1907, A., i, 223.

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*cyclo***Pentenealdehyde** and its oxime (Wallach), 1906, A., i, 564.

*cyclo***Pentene***iso***butyric acid** and its salts (Wallach and Fleischer), 1907, A., i, 618.

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$\Delta^{3}$-*cyclo***Pentene-1:2-dione,** absorption spectra of derivatives and isomerides of (Purvis), 1910, P., 327; 1911, T., 107.

$\Delta^{3}$-*cyclo***Pentene-1:2-dione,** 3:4:5:5-*tetra*bromo- (Jackson and Russe), 1906, A., i, 290.

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*cyclo***Pentenemalonic acid** and its ethyl ester (Eykman), 1909, A., i, 718.

$\Delta^{1}$-*cyclo***Pentene methyl ketone** and its semicarbazone (Harding, Haworth, and Perkin), 1908, T., 1961.

α-$\Delta^{1}$-*cyclo***Pentenepropionic acid,** α-cyano-, methyl ester (Harding and Haworth), 1910, T., 490.

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$\Delta^{\beta}$-**Pentenoic acid,** bromo- (Fittig and Scheen), 1904, A., i, 555.
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$\Delta^{\alpha}$-**Penten-γ-ol,** β-bromo-, and its phenylurethane and ααβ-*tri*-iodo- (Lespieau), 1911, A., i, 347.

$\Delta^{\alpha}$-**Penten-δ-ol** and its acetyl derivative (Pariselle), 1912, A., i, 331.

$\Delta^{\beta}$-**Penten-δ-ol** and its chloride (Reif), 1908, A., i, 847.

$\Delta^{1}$-*cyclo***Penten-1-ol,** acetate of (Mannich and Hâncu), 1908, A., i, 276.

*cyclo***Pentenone,** *penta*chloro- (Zincke and Meyer), 1909, A., i, 592.

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$\Delta^{\alpha}$-**Pentenylamine** and its derivatives (v. Braun), 1911, A., i, 613.

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$\Delta^{\delta}$-**Pentinene-β-carboxylic acid** and its ethyl ester and silver salt (Perkin and Simonsen), 1907, T., 832; (Gardner and Perkin), 1907, T., 848; P., 116.
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 3-bromo-9(10)-hydroxy-, 3-bromo-9:10-diacetoxy-, 9(10)-chloro-3-bromo-10(9)-hydroxy-, and 3:9(10)-hydroxy-, and derivatives of (Schmidt and Lumpp), 1910, A., i, 165.
 3-bromo-9:10-*di*hydroxy-, and its acetyl derivative (Schmidt and Lumpp), 1910, A., i, 313.
 3:9-*di*bromo-10-hydroxy- (Schmidt and Spoun), 1910, A., i, 553.
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 9:10-*di*hydroxy-, and its diacetyl, amino-, and nitro-derivatives (Schmidt and Austin), 1904, A., i, 69; (Schmidt and Kämpf), 1904, A., i, 70, 71.
  and its dibenzoyl derivative (Knesch), 1904, A., i, 812.
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 3:4:5-*tri*hydroxy-, and its trimethyl derivative (Vongerichten and Dittmer), 1906, A., i, 422.
 3:4:8-*tri*hydroxy-, synthesis of derivatives of (Knorr and Hörlein), 1909, A., i, 918.
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**9-Phenanthreneazo-*β*-naphthol** (Schmidt and Strobel), 1903, A., i, 692.
**5:5′-Phenanthrenebis-3-ethylrhodanic acid** (Butscher), 1911, A., i, 333.
**5:5′-Phenanthrenebis-3-phenylrhodanic acid** (Butscher), 1911, A., i, 333.

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3-bromo- (Pschorr and Schütz), 1906, A., i, 850.
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**ψ-Phenanthroline,** derivatives of (Kaufmann, Radošević, Hüssy, and Damje), 1909, A., i, 608.
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**10-Phenanthrone,** 9:9-*di*chloro-, phenanthrene derivatives from (Schmidt and Lumpp), 1909, A., i, 34.
**9-Phenanthroxylacetoxyacetoacetic acid,** ethyl ester (Richards), 1910, T., 1459; P., 195.
**Phenanthroxylacetoxymalonic acid,** ethyl ester (Richards), 1910, T., 1457; P., 195.
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**2-Phenanthryl** ethyl ether, and its 10-amino- and 10-nitro-derivatives (Henstock), 1906, T., 1528; P., 235.
**3-Phenanthryl** ethyl ether, 10-amino- and 2:7-*di*bromo-10-nitro- (Henstock), 1906, T., 1531; P., 236.
**9-Phenanthryl** oxide (Japp and Knox), 1905, T., 684.
**10-Phenanthryl** sulphide, *di*-9-hydroxy- and its dibenzoyl derivative (Schmidt and Sauer), 1912, A., i, 36.
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**9-Phenanthrylacetic acid** (Willgerodt and Albert), 1911, A., i, 882.
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**Phenanthryl-9-glyoxylic acid,** 10-hydroxy-, lactone of, and its barium salt and phenylhydrazone (Meyer and Spengler), 1905, A., i, 220, 362; (Scharwin), 1905, A., i, 448.
**9-Phenanthrylmethylcarbinol** and its acetate (Pschorr), 1906, A., i, 820.
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    *tetra*nitro-, reactions of, and sodium derivative (Barnett and Smiles), 1909, T., 1259; P., 195.
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*o*-**Phenetidine,** 5-chloro-, and its acetyl derivative (Orton and King), 1911, T., 1190.
  3:5-*di*nitro-, and its *N*-alkyl derivatives (Blanksma), 1905, A., i, 431.
*m*-**Phenetidine** (3-*ethoxyaniline*), 2:4:6-*tri*bromo-3-nitro- and 3-nitro- (Blanksma), 1905, A., i, 431.
*m*-**Phenetidine** (3-*ethoxyaniline*), 2:6-*di*nitro- (Blanksma), 1908, A., i, 158.
*p*-**Phenetidine,** action of ethyl acetylsuccinate and ethyl diacetylsuccinate on (Rossi), 1906, A., i, 982.
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*p*-**Phenetidine,** 5-chloro-, and its hydrochloride and acetyl derivative (Orton and King), 1911, T., 1190.
  2:6-*di*nitro-, derivatives of, and *tri*nitro- (Reverdin), 1912, A., i, 963.
*p*-**Phenetidine series,** asymmetric ammonium salts of the (Wedekind and Fröhlich), 1907, A., i, 409.
γ-**Phenetidino-α-phenoxypropanol** (Fourneau), 1910, A., i, 247.
*p*-**Phenetidine-*o*-sulphonic acid** (Aktien-Gesellschaft für Anilin-Fabrikation), 1904, A., i, 310.
*p*-**Phenetidinesulphonic acid,** 2-chloro-, azo-derivative of (Aktien-Gesellschaft für Anilin-Fabrikation), 1908, A., i, 1023.
*p*-**Phenetidineurethaneacetamide** (A. and L. Lumière and Barbier), 1906, A., i, 245.
*p*-**Phenetidinomethyleneacetoacetyl-*p*-phenetidide** (Dains and Brown), 1909, A., i, 781.
*o*-**Phenetidinomethyleneacetylacetone** (Dains and Brown), 1909, A., i, 782.
*o*-**Phenetidinomethylenemalonic acid,** ethyl ester, *o*-phenetidide of (Dains and Brown), 1909, A., i, 781.
4-*p*-**Phenetidinomethylene-1-phenyl-3-methyl-5-pyrazolone** (Dains and Brown), 1909, A., i, 782.
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3-*p*-**Phenetidino-1-phenyltriazole** and its hydrochloride (Fromm and Vetter), 1907, A., i, 984.
5-*p*-**Phenetidino-1-phenyltriazole,** 3-amino-, and its hydrochloride and acetyl derivative (Fromm and Vetter), 1907, A., i, 984.
2-*p*-**Phenetidinopyridine** (2-p-*ethoxyanilinopyridine*) (Fischer and Merl), 1903, A., i, 52.

*β*-**Phenetidinotricarballylic acid** and its ethyl ester and its amide, imide, imide-acid, and nitrile (Schroeter and Schwamborn), 1905, A., i, 820.

*p*-**Phenetidylglycyl** guaiacolsulphonate (Tagliavini), 1909, A., i, 224.

*a*-*p*-**Phenetidylstilbene**, and *β*-bromo-, and its *di*bromo-derivative (Busignies), 1910, A., i, 668.

**Phenetole**, aldoximation of, by means of mercury fulminate and aluminium oxychloride (Scholl and Kremper), 1903, A., i, 348.
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  *p*-aminothio-, *p*-iodothio-, and their derivatives (Willgerodt and Klinger), 1912, A., i, 255.
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  *p*-bromo-, action of sulphur on the organo-magnesium compounds of (Taboury), 1905, A., i, 644.
  *p*-mono-, and 2:4-*di*-bromo- and -chloro- (Autenrieth and Mühlinghaus), 1907, A., i, 32.
  *penta*bromo- (Bonneaud), 1910, A., i, 670.
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  *s*-*di*nitro-, nitration and reduction of (Blanksma), 1905, A., i, 431.
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  3- and 4-nitro-2-cyano-, and 4:6-*di*-nitro-2-cyano- (Blanksma), 1908, A., i, 978.
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  *p*-nitroso- (Rising), 1904, A., i, 238.

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1-*p*-**Phenetoleazo-2-chloronaphthalene** (Charrier and Ferreri), 1911, A., i, 1046.

*o*-**Phenetoleazoglutacononic acid**, ethyl ester, *o*-phenetylhydrazone (Henrich, Reichenburg, Nachtigall, Thomas, and Baum), 1910, A., i, 902.

*p*-**Phenetoleazo-*a*-hydroxynaphthoic acid** (Sircar and Watson), 1912, A., i, 1037.

5-*p*-**Phenetoleazo-8-hydroxyquinoline**, and its hydrochloride and sodium salt (Fox), 1910, T., 1344.

*o*- and *p*-**Phenetoleazo-*β*-naphthol** Charrier and Ferreri), 1911, A., i, 1046.

1-*o*- and -*p*-**Phenetoleazo-2-naphthyl ethyl ethers** and their hydrochlorides (Charrier and Ferreri), 1912, A., i, 814.

*p*-**Phenetoleazosalicylic acid** and its acetyl derivative (Grandmougin and Guisan), 1908, A., i, 927.

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**Phenetoleazosulphobenzylideneaminosalicylic acid**, potassium salt (Green and Sen), 1910, T., 2245.

**Phenetoleazosulphobenzylideneaniline** and its *p*-**sulphonic acid** (Green and Sen), 1910, T., 2244.

**Phenetoleazosulphobenzylidene-*a*- and -*β*-naphthylamine**, potassium salts (Green and Sen), 1910, T., 2246.

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*p*-**Phenetolesulphon-acetonitrile** and **ethenylaminoxime** (Tröger and Volkmer), 1905, A., i, 356.

*p*-**Phenetolesulphondialkylacetonitriles** (Tröger and Vasterling), 1905, A., i, 871.

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**Phenetylaldehyde,** *p*-thio-, preparation of, and its azine, phenylhydrazone, and semicarbazone (MONIER-WILLIAMS), 1906, T., 278 ; P., 22.

*p*-**Phenetyl butyl ketone** and its semicarbazone (LAYRAUD), 1906, A., i, 433.

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*p*-**Phenetyldiguanide** and its derivatives (COHN), 1911, A., i, 928.

**Phenetyldiguanides,** *o*- and *p*-, and their salts (A. and L. LUMIÈRE and PERRIN), 1905, A., i, 250.

*p*-**Phenetyldimethyl-**$\alpha$**-naphthamidine** and its platinichloride (v. BRAUN), 1904, A., i, 689.

*o*- and *p*-**Phenetyldimethylsulphine hydroxides,** salts of (KEHRMANN and SAVA), 1912, A., i, 968.

*p*-**Phenetylguanidophenylthiocarbamide** and its acetyl, anhydro-, and benzyl derivatives (FROMM and VETTER), 1907, A., i, 983.

*m*-**Phenetylhydroxylamine** (BAMBERGER and CZERKIS), 1904, A., i, 238.

*p*-**Phenetylhydroxylamine** (RISING), 1904, A., i, 237.

**3-*p*-Phenetyl-2-methyl-4-dihydroquinazolone** (BOGERT and BEAL), 1912, A., i, 394.

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**3-*p*-Phenetyl-2-methyl-4-dihydroquinazolone,** 7-amino-, acetyl derivative (BOGERT, AMEND, and CHAMBERS), 1910, A., i, 895.

**Phenetyl methyl ketone,** *o*-iododichloride, and *o*-iodo- (WILLGERODT and BURKHARD), 1912, A., i, 630.

*S*-**Phenetyl-*N*-methyl-3:9-*di*nitrophenazothionium** hydroxide and salts (SMILES and HILDITCH), 1908, T., 152.

*S*-**Phenetyl-*N*-methylphenazothionium** salts (SMILES and HILDITCH), 1907, P., 306.

*S*-**Phenetyl-3:9-*di*nitrophenazothionium,** hydroxide and salts (SMILES and HILDITCH), 1907, P., 306 ; 1908, T., 149.

*S*-**Phenetylphenazothionium,** *tetra*chloro- (BRADY and SMILES), 1910, T., 1561.

*tetra*nitro-, hydroxide and sulphate (BARNETT and SMILES), 1910, T., 368.

*S*-**Phenetylphenazothionium hydroxide,** $\alpha$-3:9-*di*nitro- (SMILES and HILDITCH), 1908, T., 1694.

**3-*p*-Phenetyl-2-styryl-4-dihydroquinazolone** (BOGERT and BEAL), 1912, A., i, 394.

*p*-**Phenetylsulphinic acid,** alkaloidal salts, and their rotatory power (HILDITCH), 1908, T., 1621.

*p*-**Phenetylsulphonic acid,** alkaloidal salts, and their rotatory power (HILDITCH), 1908, T., 1621.

*p*-**Phenetyl*di*thiobiuret** (FROMM and VETTER), 1907, A., i, 983.

*S*-**Phenetylthionine** and its hydroxide and salts (SMILES and HILDITCH), 1908, T., 1695.

*p*-**Phenetylthiouret** hydrochloride (FROMM and VETTER), 1907, A., i, 983.

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*iso***Pheno-1:3:4-diazosulphonine** (EKBOM), 1903, A., i, 411.

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- **Phenolphthaloquinone**, disodio-derivative (Fleig), 1909, A., i, 495.
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- *o*-**Phenolsulphonic acid**, salts (Vial), 1906, A., i, 255.

- *o*-**Phenolsulphonic acid**, *p*-amino-, preparation of (Aktien-Gesellschaft für Anilin-Fabrikation), 1909, A., i, 224.
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- *m*-**Phenolsulphonic acid**, isolation of, and its metallic salts (Obermiller), 1911, A., i, 442.
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- *p*-**Phenolsulphonic acid**, 5-nitro-2-amino-, preparation and diazo-derivative of (Farbwerke vorm. Meister, Lucius, & Brüning), 1908, A., i, 157.
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    *p*-nitrothio- (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 441.
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**Phenoxozone** (*diphenylene dioxide*) (Ullmann and Stein), 1906, A., i, 258.
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    *p*-toluenesulphonyl derivative and its ethyl ester, and 3-nitro-*p*-toluenesulphonyl derivative (Reverdin and de Luc), 1909, A., i, 913.
  *m*-hydroxy- (*resorcinoloxyacetic acid*) and its ethyl ester and chloride (Bischoff and Fröhlich), 1907, A., i, 698.
  4-iodo-2:5-*di*nitro- (Reverdin and Dinner), 1907, A., i, 696.
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*o*-**Phenoxyacetoxybenzoic acid** (Chemische Fabrik von Heyden), 1910, A., i, 486.

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α-**Phenoxyacetylphenylacetonitrile** and *p*-chloro- (v. Walther and Herschel), 1911, A., i, 237.

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α-**Phenoxyacrylic acid**, β-hydroxy-, ethyl ester, and its sodium derivative (Johnson and Heyl), 1907, A., i, 729.

β-**Phenoxyacrylonitriles**, synthesis of β-substituted (Moureu and Lazennec), 1906, A., i, 276.

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*o*-**Phenoxybenzoic acid** (*salicylic acid phenyl ether*), preparation of (Ullmann), 1904, A., i, 417; (Aktien-Gesellschaft für Anilin-Fabrikation), 1904, A., i, 499.

*o*-**Phenoxybenzoic acid**, 4-bromo- (Gomberg and Cone), 1910, A., i, 58.
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*p*-**Phenoxybenzoic acid**, 2′:4′-*di*nitro-, and its silver salt (Cook), 1910, A., i, 731.

*p*-**Phenoxybenzophenone** (Kipper), 1905, A., i, 648.

*p*-**Phenoxybenzoylbenzoic acid** (Kipper), 1905, A., i, 648.

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γ-**Phenoxy-α-*p*-chlorophenylacetoacetic acid**, ethyl and methyl esters and their derivatives (v. Walther and Herschel), 1911, A., i, 238.

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α-**Phenoxycinnamic acid**, elimination of carbon monoxide and carbon dioxide from (Stoermer and Biesenbach), 1905, A., i, 524.
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**Phenoxydiphenylsulphonium** salts (Barnett and Smiles), 1908, P., 124.

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**β-Phenoxyethylenic ketones,** action of hydrazine and of hydroxylamine on (Moureu and Brachin), 1904, A., i, 824.

**γ-Phenoxyethylmalonic acid,** ethyl ester (Pyman), 1912, T., 535.

**γ-Phenoxyethylmalonic acid,** α-bromo- (Fischer and Blumenthal), 1907, A., i, 191.

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**ζ-Phenoxyheptoic acid** and its silver salt (v. Braun), 1907, A., i, 110.

**η-Phenoxyheptylamine** and its salts, acyl derivatives, and carbamate (v. Braun and Müller), 1907, A., i, 29.

**ε-Phenoxyhexoic acid** and its silver salt and amide (v. Braun and Steindorff), 1905, A., i, 342.

**ε-Phenoxyhexonitrile** (v. Braun and Steindorff), 1905, A., i, 207.

**ζ-Phenoxyhexyl alcohol** and its phenylurethane (v. Braun, Deutsch, and Schmatloch), 1912, A., i, 433.

**ζ-Phenoxyhexylamine** and its additive salts and derivatives (v. Braun and Steindorff), 1905, A., i, 826.

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**α-Phenoxy-*p*-methoxystyryl methyl ketone** (*p-methoxybenzylidenephenoxyacetone*) and its derivatives (Stoermer and Wehln), 1903, A., i, 40.

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**4-Phenoxy-3-methyltritanic acid** and its anhydride (v. Liebig), 1908, A., i, 541.

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**5-Phenoxy-4-phenoxymethyltetrahydro-6-pyrimidone,** 2-thio- (Johnson and Hill), 1912, A., i, 912.

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**γ-Phenoxy-α-phenylcrotononitrile,** β-amino- (v. Walther and Herschel), 1911, A., i, 237.

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**ε-Phenoxy-α-phenyl-α-methylpropylpentamethylenediamine,** ε-cyano- (v. Braun), 1909, A., i, 508.

**γ-Phenoxy-α-phenylpropane,** β-hydroxy- (Fourneau), 1910, A., i, 246.

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*α*-**Phenoxypropionic acid**, phenyl ester (Bischoff and Wachtsmuth), 1907, A., i, 33.
*α*-**Phenoxypropionic acid**, *o*-, *m*-, and *p*-nitro-, *o*-, *m*-, and *p*-nitrophenyl esters, and chlorides (Bischoff, Ambardanoff, and Schmähling), 1907, A., i, 36.
*α*-**Phenoxypropionyl chloride** (Stoermer and Atenstädt), 1903, A., i, 42.
*γ*-**Phenoxypropyl** iodide and the action of sodium on (Hamonet), 1903, A., i, 251.
*β′*-**Phenoxy***iso***propyl alcohol**, *β*-amino-, and its salts (Boyd), 1910, T., 1791; P., 209.
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*γ*-**Phenoxypropylpiperidine** and its hydriodide and methiodide (v. Braun), 1909, A., i, 507.
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*γ*-**Phenoxypropyltrimethylammonium** iodide (v. Braun), 1911, A., i, 612.
**5-Phenoxyquinizarin**, 8-chloro- (Frey), 1912, A., i, 477.
*β′*-**Phenoxy-*β*-2:5-quinoyl***iso***butyric acid**, *α*:4:2′:5′-*tetra*hydroxy-, formation of (Engels, Perkin, and Robinson), 1908, T., 1155.
*ω*-**Phenoxystyrene** and its bromides (Stoermer and Biesenbach), 1905, A., i, 525.
*α*-**Phenoxystyryl methyl ketone** (*benzylidenephenoxyacetone*) and its oxime, phenylhydrazone, and semicarbazone (Stoermer and Wehln), 1903, A., i, 40.
  *o*-hydroxy-, and its semicarbazone (Stoermer and Wehln), 1903, A., i, 41.
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*o*-**Phenoxytriphenylcarbinol** (Ullmann and Engi), 1904, A., i, 682.
*α*-**Phenoxytriphenylmethane** (v. Baeyer), 1909, A., i, 642.
**5-Phenoxyuracil** (Johnson and Guest), 1909, A., i, 745.
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*α*-**Phenoxy***iso***valeric acid**, phenyl ester (Bischoff and Wachtsmuth), 1907, A., i, 33.
*δ*-**Phenoxy-*γ*-valerolactone** and its *α*-**carboxylic acid** and their bromo-derivatives (Fischer and Krämer), 1908, A., i, 858.
*δ*-**Phenoxy-*γ*-valerolactone**, bromo-*α*-amino-, and its hydrobromide and hydrochloride (Fischer and Krämer), 1908, A., i, 858.
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    2-chloro-4-iodo-, 2:6-*di*chloro-4-iodo-, 2:3:6-*tri*chloro-4-iodo-, 2:3:5:6-*tetra*chloro-4-iodo-, and *p*-iodo-, and their dichlorides (Brazier and McCombie), 1912, T., 972.
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  *β*-aminoethyl sulphide and sulphone hydrochlorides (Gabriel and Colman), 1912, A., i, 116.
  *ζ*-aminohexyl ketone and its salts (Gabriel), 1909, A., i, 892.

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  - benzoate, 2-chloro-4-iodo-, 2:6-*di*chloro-4-iodo-, 2:3:6-*tri*chloro-4-iodo-, 2:3:5:6-*tetra*chloro-4-iodo-, and *penta*chloro-, and their dichlorides (BRAZIER and MCCOMBIE), 1912, T., 973.
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  - benzyl ether (V. MEYER), 1910, A., i, 316.
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    - and *p*-bromo- and *p*-chloro- (TABOURY), 1905, A., i, 56.
  - $\gamma$-bromo- and $\gamma\delta$-*di*bromo-butyl ether (V. BRAUN and DEUTSCH), 1912, A., i, 106.
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  - chloro*di*thiocarbonate (RIVIER), 1907, A., i, 838.
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  - $\epsilon$-dimethylaminoamyl ether and its picrate (V. BRAUN), 1911, A., i, 612.
  - $\delta$-dimethylaminobutyl ether (V. BRAUN), 1911, A., i, 612.
  - dimethylaminoethyl ether and its aurichloride (KNORR), 1905, A., i, 813.
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  - ethers (COOK and FRARY), 1903, A., i, 163 ; (COOK and EBERLY), 1903, A., i, 250 ; (COOK), 1903, A., i, 337 ; (THOMS), 1903, A., i, 415, 558.
    - action of bromine on, in the presence of aluminium bromide (BONNEAUD), 1910, A., i, 669.
    - derivatives of, with glycerol (FOURNEAU), 1910, A., i, 246.
    - *p*-chloro-*o*-amino-, 2- and 4-chloro-2′-amino-, 2- and 4-chloro-4′-amino-, 4:2′- and 4:4′-*di*chloro-2-amino-, 2:4′-*di*chloro-4-amino-, and their derivatives (FARBENFABRIKEN VORM. F. BAYER & CO.), 1910, A., i, 312.
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    - *p*-amino-, derivatives of, and colouring matters from (MAILHE), 1912, A., i, 548.
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    - *m*- and *p*-amino-, and the salts and acetyl derivative of the *m*-ether (ULLMANN and SPONAGEL), 1907, A., i, 39.

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**Phenyl** iodo*di*chloride, *p*-amino-, *N*-acetyl derivative of (Willgerodt and Nägeli), 1907, A., i, 1025.
  *p*-iodofluoride, bromo- (Weinland and Stille), 1903, A., i, 748.
  *p*-iodo-, -iodoso-, and -iodoxy-phenyl ethers, *m-di*nitro- (Willgerodt and Wieland), 1909, A., i, 912.
  iodoxyfluoride hydrofluoride and the *p*-bromo-derivative (Weinland and Reischle), 1909, A., ii, 37.
**Phenyl mercaptan** (*thiophenol*), new reducing agent for the preparation of (Winter), 1904, A., i, 581.
  autoxidation of (Engler and Broniatowski), 1904, A., i, 870.
  action of aluminium chloride on (Deuss), 1908, A., i, 530.
  action of bromine in presence of aluminium bromide on (Taboury), 1907, A., i, 837.
  action of phosphorus pentabromide and pentachloride on (Autenrieth and Geyer), 1909, A., i, 26.
  interaction of, with thionyl chloride (Tasker and Jones), 1910, P., 234.
  *o*-amino-, benzoyl derivative (Möhlau, Beyschlag, and Köhres), 1912, A., i, 212.
    dibenzoyl derivative (Reissert), 1905, A., i, 927.
  *p*-amino-, and its *N*-acetyl- and -benzoyl derivatives (Hinsberg), 1906, A., i, 655.
    and its methyl ether and its hydrochloride and sulphate (Zincke and Jörg), 1909, A., i, 789.
  2:4-*di*amino-, hydrochloride of (Müller), 1907, A., i, 89.
  *o*-chloro- (Friedländer and Mauthner), 1905, A., i, 102.
  *m*-hydroxy-, and its lead salt (v. Szathmáry), 1910, A., i, 733.
  iodo- (Zincke and Jörg), 1911, A., i, 40.
  *o*-nitro-, methyl ether (Mayer), 1909, A., i, 826.
  *p*-nitro-, derivatives of (Fromm and Wittmann), 1908, A., i, 631.
**Phenyl** mercaptans, nitro-, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 441.
  methoxymethyl sulphide (de Lattre), 1912, A., i, 745.
  methyl ether. See Anisole.
    amino-. See Anisidine.
  methyl sulphide, *p*-amino-, *p*-bromo-, *p*-iodo-, and *p*-nitro- and their derivatives (Gattermann), 1912, A., i, 985.

**Phenyl** methyl sulphide, *p*-amino-, *N*-acetyl derivative of (Hinsberg), 1906, A., i, 655.
    *p*-bromo- (Taboury), 1905, A., i, 57; (Bourgeois and Abraham), 1912, A., i, 109.
    4-bromo-2-nitro- (Claasz), 1912, A., i, 514.
  α- and β-naphthyl ethers (Hönigschmid), 1903, A., i, 165.
  α- and β-naphthyl sulphides, *p*-bromo- (Bourgeois and Fouassin), 1911, A., i, 964.
  oxide, *o*-nitrothio- (Zincke and Farr), 1912, A., i, 763.
  ε-phenylamyl ether (v. Braun), 1910, A., i, 844.
  γ-phenylpropyl ether (v. Braun), 1910, A., i, 845.
  phenyl-*mono*- and -*di*-thiolcarbonates, *di*thiolcarbonate, and *tri*thiocarbonate (Rivier), 1907, A., i, 837.
  β-phthalimidoethyl sulphide and sulphone (Gabriel and Colman), 1912, A., i, 116.
  propyl ether, *penta*bromo- (Bonneaud), 1910, A., i, 670.
  silver selenide (Doughty), 1909, A., i, 297.
  sodium carbonate, action of acetone on (Moll van Charante and Montagne), 1910, A., i, 311.
  sulphide, refractive index of (Himmelbauer), 1909, A., i, 570.
    action of hydrogen peroxide on (Hinsberg), 1910, A., i, 164.
    sulphur derivatives of (Bourgeois and Petermann), 1904, A., i, 28.
    *o*-amino-, and its sulphate and acetyl derivative and *o*-nitro- (Mauthner), 1906, A., i, 949.
      and *o*- and *p*-hydroxy- (Bourgeois and Huber), 1912, A., i, 347.
    *p*-amino- and its salts and diacetyl derivative, and *di*thio- (Hinsberg), 1905, A., i, 339, 518; (Hofmann), 1905, A., i, 427.
      sulphonation of (Schmidt), 1906, A., i, 243.
    *op*-*di*amino- (Hinsberg), 1905, A., i, 339, 518; (Hofmann), 1905, A., i, 427.
    4:6:4′:6′-*tetra*-bromo- and -chloro-2:2′-*di*nitro- (Blanksma), 1908, A., i, 147.
    *o*-chloro- (Friedländer and Mauthner), 1905, A., i, 102.
    chlorohydroxy- (Gazdar and Smiles), 1910, T., 2252.
**Phenyl** sulphide, hydroxy-, and its *o*-carboxylic acid (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 313.
    *oo*-*di*hydroxy- and its dimethyl and diacetyl derivatives (Mauthner), 1906, A., i, 421.
  *di*sulphide, action of aluminium chloride on (Deuss), 1909, A., i, 321.
    *di*amino-. See Aniline, *di*thio-.
  sulphoxide (Smiles and Le Rossignol), 1906, T., 706; P., 24, 87.
  thiocyanate, 2:4-*di*amino-, yellow sulphur dye from (Aktien-Gesellschaft für Anilin-Fabrikation), 1905, A., i, 913.
    2-amino-5-hydroxy-, 2:4-*di*amino-5-hydroxy-, and 4-nitro-2-amino-5-hydroxy-, and their derivatives (Fichter and Beck), 1912, A., i, 105.
    *di*nitro-, decomposition of (Hinsberg), 1907, A., i, 124.
  *o*-tolyl ether, *p*-nitro-, and its sulphonic acid and its salts (Cook and Eberly), 1903, A., i, 250.
    *p*-amino-, and its salts (Cook and Eberly), 1903, A., i, 250.
    *di*nitro- (Cook and Eberly), 1903, A., i, 251.
  *m*-tolyl ether, *p*-amino- and its salts (Cook and Frary), 1903, A., i, 163.
    *p*-nitro-, and its nitro-derivative and sulphonic acid and its salts (Cook and Frary), 1903, A., i, 163.
  *p*-tolyl ether, *p*-amino-, and its salts, and nitro-derivatives (Cook), 1903, A., i, 337.
    *p*-nitro-, and its sulphonic acid and its salts (Cook), 1903, A., i, 337.
    2:4-*di*nitro-, and its derivatives (Cook), 1910, A., i, 731.
  *m*- and *p*-tolyl ethers, *p*-chloro-, and their sulphonic acids (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 312.
  *o*-, *m*-, and *p*-tolyl ethers, 2 and 4-amino- (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 374.
  *o*-tolyl sulphide, *o*-nitro- (Mauthner), 1906, A., i, 949.
  *p*-tolyl sulphide (Bourgeois and Fouassin), 1911, A., i, 964.
    amino-, and its salts and derivatives (v. Meyer and Heiduschka), 1903, A., i, 808.
    hydroxy-, and its methyl ether and *o*-carboxylic acid (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 313.

**Phenyl** vinyl ether (WOHL and BERTHOLD), 1910, A., i, 620.

**Phenylacenaphthaphenazonium**, and 2-amino-, and 3-chloro-, and their derivatives and salts (ULLMANN and CASSIRER), 1910, A., i, 202.

*β*-**Phenylacenaphthylmethane** and its picric acid derivative (DZIEWOŃSKI and DOTTA), 1904, A., i, 390; (DZIEWOŃSKI and WECHSLER), 1904, A., i, 803.

**Phenylacetaldehyde**, synthesis of (HOUBEN), 1905, A., i, 600.
fate of, in the animal organism (DAKIN), 1909, A., ii, 684.
reactions of, and its semicarbazone (AUWERS and KEIL), 1904, A., i, 27.
diacetate (WOHL and MAAG), 1911, A., i, 14.

**Phenylacetaldehyde**, *α*-cyano- (BODROUX), 1910, A., i, 623.
*p*-hydroxy-, and its *p*-nitrophenylhydrazone (LANGHELD), 1909, A., i, 557.

*enol***Phenylacetaldehyde** monoacetate. See Phenylvinyl acetate.

**Phenylacetaldehydephenylbenzylhydrazone** (FOURNIER), 1904, A., i, 63.

**Phenylacetaldehyde-phenylhydrazones** and **semicarbazone** (HENLE), 1905, A., i, 490.

**Phenylacetaldoxime** (EMDE), 1911, A., ii, 314.
and *o*-nitro- (WEERMAN), 1909, A., i, 589.
formation of (BOUVEAULT and WAHL), 1903, A., i, 616.

**Phenylacetamide**, *N*-benzoyl derivative (WHEELER, JOHNSON, and MCFARLAND), 1903, A., i, 859.

**Phenylacetamide**, *α*-amino,- and its derivatives and *α*-chloroacetylamino-, and *α*-oxalylamino- (CLARKE and FRANCIS), 1911, T., 320; P., 22.
*o*- and *α*-bromo- (STEINKOPF and BENEDEK), 1908, A., i, 981; (POPOVICI), 1909, A., i, 28.
*α*-bromonitro- (VAN PESKI), 1909, A., i, 647.
*o*-bromo-*α*-*iso*nitro-, potassium salt of, and *α*:*o*-*di*bromo-*α*-nitro- (WISLICENUS and FISCHER), 1910, A., i, 622.
*p*-chloro*iso*nitroso- (ZIMMERMANN), 1903, A., i, 92.
*o*-nitro- (REISSERT), 1908, A., i, 983; (PSCHORR and HOPPE), 1910, A., i, 737.
2:4-*di*nitro- (BORSCHE and OPPENHEIMER), 1912, A., i, 653.

**Phenylacetamidine**, cyano-, preparation of (PELLIZZARI), 1911, A., i, 1035.

**Phenylacetanilide**, sulphur derivative (REISSERT and MORÉ), 1906, A., i, 827.

**Phenylacetanilide**, *α*-cyano- (HESSLER), 1908, A., i, 183.
2:4-*di*nitro- (BORSCHE), 1909, A., i, 232.

**Phenylacethydroxamic acid** and its salts and derivatives (JONES), 1912, A., i, 692.

**Phenylacetic acid** (*α-toluic acid*), behaviour of, in fowls (TOTANI), 1910, A., ii, 880.
preparation of anhydride of, and silver salt, action of sulphur monochloride on (DENHAM), 1909, T., 1239; P., 179.
brucine and cinchonine salts, and their optical activity (HILDITCH), 1908, T., 1390.
yttrium salt (PRATT and JAMES), 1911, A., ii, 893.
ethyl ester, condensation of alkyl nitrates and nitrites with (WISLICENUS and GRÜTZNER), 1909, A., i, 477.
glycyl ester (FARBENFABRIKEN VORM. F. BAYER & CO.), 1912, A., i, 974.
menthyl ester (COHEN and DUDLEY), 1910, T., 1749.
phenyl ester (STOERMER and BIESENBACH), 1905, A., i, 525; (WEISL), 1905, A., i, 905.
reaction of (NOELTING and KADIERA), 1906, A., i, 593.

**Phenylacetic acid**, *α*-amino-. See Phenylaminoacetic acid.
*p*-bromo-, ethyl ester, oximino-, ethyl ester, potassium derivative, and its *p*-nitrobenzoates, oximino-*p*-bromo-, ethyl ester, and its benzoate (WISLICENUS and GRÜTZNER), 1909, A., i, 477.
*tri*bromo-*m*-hydroxy- (V. PECHMANN, BAUER, and OBERMILLER), 1904, A., i, 593.
*tetra*bromo-*p*-hydroxy-, and its methyl ester, and their acetyl derivatives, amide, and nitrile and its acetyl derivative and quinone (ZINCKE and BÖTTCHER), 1906, A., i, 166.
*tetra*chloro-*p*-hydroxy-. (ZINCKE and BÖTTCHER), 1906, A., i, 739.
*di*chloro*tri*nitro-, ethyl ester (JACKSON and SMITH), 1904, A., i, 802.

**Phenylacetic acid,** *tri*chloro*di*nitro-, and its ethyl ester (Jackson and Carlton), 1904, A., i, 486.
  α-cyano-. See Phenylcyanoacetic acid.
  *p*-hydroxy-, preparation of (Aloy and Rabaut), 1911, A., i, 780.
  2:5-*di*hydroxy-. See Homogentisic acid.
  *o*-nitro-, *N*-hydroxyindole derivatives from (Reissert), 1909, A., i, 51.
  *p*-nitro-, oximino-derivative of ethyl ester (Borsche), 1909, A., i, 925.
  *o*- and *p*-nitro-, ethyl esters, reactivity of the methylene groups in (Borsche), 1909, A., i, 925.
  2:6-*di*nitro-, and its methyl ester (Borsche and Rantscheff), 1911, A., i, 332.
  β-oximino-, copper salts (Wislicenus and Grützner), 1909, A., i, 478.
  oximinonitro-, ethyl ester, and its derivatives (Schmidt and Dieterle), 1910, A., i, 815.
  thio- and thiol- (Ulpiani and Ciancarelli), 1904, A., i, 162.
  *di*thio-. See Benzylcarbithionic acid.
  *o*-thiocyano- (Marschalk), 1912, A., i, 576.
**Phenylacetic anhydride,** compound of, with iodine and potassium iodide (Clover), 1904, A., i, 322.
**Phenylacetiminoethyl** ether hydrochloride, *p*-chloro- (v. Walther and Grossmann), 1909, A., i, 55.
**α-Phenylacetoacetic acid,** α-bromo-, ethyl ester, carbon monoxide scission from (Dimroth and Eble), 1907, A., i, 57.
  2:4-*di*nitro-, ethyl ester, and its reduction products (Reissert and Heller), 1905, A., i, 59.
    ethyl and methyl esters, and related compounds (Borsche), 1909, A., i, 232, 385.
  2:6-*di*nitro-, ethyl ester, and its *O*-benzoyl derivative (Borsche and Rantscheff), 1911, A., i, 332.
**γ-Phenylacetoacetic acid,** α-cyano-, ethyl ester, and its salts, reactions, and anilide (Smith and Thorpe), 1907, T., 1899; P., 249.
**Phenylacetoacetyl-6-amino-2-methylindole,** 2′:4′-*di*amino-, and its tribenzoyl derivative (Reissert and Heller), 1905, A., i, 60.
**Phenylacetoacetyl-2:4-*di*aminophenylacetoacetic acid,** 2:4-*di*amino-, ethyl ester, and its metallic and additive salts and acetyl and benzoyl derivatives (Reissert and Heller), 1905, A., i, 60.
**Phenylacetodiethylamide** (v. Braun), 1904, A., i, 90.
**Phenyl-ζ-acetohexylthiocarbamide** (Gabriel), 1909, A., i, 892.
**Phenylacetonazine,** *iso*nitroso- (Ponzio and Giovetti), 1908, A., i, 834.
**Phenylacetone.** See Benzyl methyl ketone.
**Phenylacetonitrile** (*benzyl cyanide*), synthesis by means of (Bodroux and Taboury), 1910, A., i, 257.
  condensations of (Atkinson and Thorpe), 1906, T., 1906; P., 281.
  action of acetyl bromide on (Kunckell and Flos), 1906, A., i, 848.
  action of cyanogen bromide on (v. Braun), 1903, A., i, 697.
  sodium derivative, action of anisaldehyde and piperonaldehyde on (Bodroux), 1911, A., i, 783.
    action of benzaldehyde on (Bodroux and Taboury), 1910, A., i, 622.
    condensation of, with benzonitrile (Atkinson, Ingham, and Thorpe), 1907, T., 591.
    action of acid chlorides, anhydrides, and of ketones on (Bodroux), 1911, A., i, 545.
    sodium derivative, action of esters on (Bodroux), 1911, A., i, 129.
    action of esters of monobasic aliphatic acids on (Bodroux), 1910, A., i, 623.
    action of, on ethyl cinnamate (Avery and McDole), 1908, A., i, 343.
**Phenylacetonitrile,** *o*-amino-, and its derivatives (Pschorr and Hoppe), 1910, A., i, 737.
  *o*-bromo-, condensation of ethyl nitrate with, and *o*-bromo-α-*iso*nitro-, and its methyl ether and sodium and potassium salts (Wislicenus and Fischer), 1910, A., i, 621.
  *p*-bromo-, and ethyl nitrate, condensation of (Wislicenus and Elvert), 1909, A., i, 29.
  ω-*p*-*di*bromo-ω-nitro- (Wislicenus and Elvert), 1909, A., i, 31.
  *p*-bromo-oximino-, and its methyl ether (Wislicenus and Elvert), 1909, A., i, 30.
  *p*-chloro-, and its condensation with aromatic esters (v. Walther and Hirschberg), 1903, A., i, 494.
  *tetra*chloro-*p*-hydroxy-, and its acetyl derivative (Zincke and Böttcher), 1906, A., i, 739.
  *o*-hydroxy- (Auwers), 1907, A., i, 929.

**Phenylacetonitrile**, *p*-nitro-, *p*-methylcyanoethylaminophenylimide of (Sachs and Kraft), 1903, A., i, 335.

*ω*-nitro- (Steinkopf, Malinowski, and Supan), 1911, A., i, 946.

methyl ether of (Hantzsch), 1907, A., i, 501.

*iso*nitroso-, and its salts and chloro- and nitro-derivatives, and their methyl ethers, benzoates, and additive compounds (Zimmermann), 1903, A., i, 91.

*α*-**Phenylacetonyldimethylamine** hydrochloride (Emde and Runne), 1911, A., i, 715.

*α*-**Phenylacetonylmethylamine** hydrochloride (Emde and Runne), 1911, A., i, 715.

*α*-**Phenylacetonyltrimethylammonium** (Emde and Runne), 1911, A., i, 714.

**Phenylacetophenone**, *ω*-2:4-*di*nitro- (Borsche), 1909, A., i, 233.

and 2:4-*di*nitro-oximino- (Borsche and Oppenheimer), 1912, A., i, 653.

**Phenylacetophenylhydrizino-ether** (Henle), 1905, A., i, 490.

**Phenylaceto-*o*-, -*m*-, and -*p*-toluidides**, *α*-cyano- (Hessler), 1908, A., i, 183.

**Phenylacetoxyacetyl-*α*-cyanoacetic acid**, ethyl ester (*ethyl phenylacetylglycolyl-α-cyanoacetate*) and its silver salt (Anschütz and Böcker), 1909, A., i, 730.

**2-Phenyl-4-*o*-acetoxybenzylideneoxazolone** (Erlenmeyer and Stadlin), 1905, A., i, 239.

**2-Phenyl-4-*m*-acetoxybenzylideneoxazolone** (Erlenmeyer and Wittenberg), 1905, A., i, 240.

**Phenyl acetoxy*tert.*-butyl ketone** and its *p*-nitrophenylhydrazone (Blaise and Herman), 1911, A., i, 880.

*α*-**Phenyl-3-acetoxycinnamic acid**, 2-nitro- (Pschorr and Quade), 1906, A., i, 851.

*α*-**Phenyl-4-acetoxycinnamic acid**, 4-nitro- (Hewitt, Lewcock, and Pope), 1912, T., 607.

*α*-**Phenyl-4-acetoxy-3-methoxycinnamic anhydride**, *o*-nitro-2-amino-. See 4-Acetoxy-3-methoxycarbostyril, *o*-nitro-.

**Phenylaceturic acid**, ethyl ester, and nitrile (Klages and Haack), 1903, A., i, 560.

**Phenylaceturic acid**, *p*-chloro- (Friedmann and Maase), 1910, A., ii, 795.

**Phenylacetyl chloride**, reaction of, with thioureas (Dixon and Taylor), 1907, T., 924; P., 120.

**Phenylacetyl chloride**, *α*-*p*-*di*chloro- (Straus), 1912, A., i, 992.

*p*-nitro- (Wedekind, Häussermann, Weisswange, and Miller), 1911, A., i, 220.

2:4-*di*nitro- (Borsche and Oppenheimer), 1912, A., i, 653.

*ω*-**Phenylacetylaminoacetophenone**, and its oxime and phenylhydrazone (Robinson), T., 2170; P., 295.

*ω*-**Phenylacetylaminoacetoveratrone** (Robinson), 1909, T., 2172; P., 296.

**1-Phenylacetylamino-2:5-dimethylpyrrole** and its **-3:4-dicarboxylic acid** (Bülow and v. Krafft), 1903, A., i, 196.

**Phenylacetylaminomethylcarbinol** (Pictet and Gams), 1910, A., i, 774.

*β*-**Phenylacetylamino-*α*-phenylethane**, *α*-hydroxy- (Robinson), 1909, T., 2171; P., 295.

**Phenyl-*p*-acetylaminotolyliodonium** hydroxide and salts (Willgerodt and Gortner), 1908, A., i, 877.

**Phenyl-*p*-acetylamino-*o*-tolylsulphone** (Ullmann and Lehner), 1905, A., i, 290.

**Phenylacetylamylthiocarbamide** (Gabriel), 1909, A., i, 493.

**Phenylacetylcarbamic acid**, ethyl ester (Ruhemann and Priestley), 1909, T., 452.

**Phenylacetylcarbinol** and its acetate (Carapelle), 1904, A., i, 158.

and its semicarbazone (Wren), 1909, T., 1592.

**Phenylacetylchlorophenylacetic acid**, ethyl ester (v. Walther and Hirschberg), 1903, A., i, 495.

**Phenylacetyl-*p*-chlorophenylacetonitrile** and its oxime and phenylhydrazone (v. Walther and Hirschberg), 1903, A., i, 495.

**Phenylacetyl-*β*-3:5-dimethoxyphenylethylamide** (Salway), 1911, T., 1322; P., 192.

**Phenylacetylene**, formation of, and its copper salts (Straus), 1906, A., i, 77.

new mode of formation of (Mühlhausen), 1907, A., i, 25.

action of potassium hydroxide on mixtures of ketones with (Faworsky), 1905, A., i, 773; (Skosarewsky; Bork), 1905, A., i, 774; (Newerowitsch; Bertrond; Romanoff), 1905, A., i, 775.

acyl derivatives, action of hydroxylamine on (Moureu and Brachin), 1904, A., i, 95.

**Phenylacetylene,** *p*-nitro- (Wieland), 1903, A., i, 767.

**Phenylacetylenecarbinol** ether (Oddo), 1904, A., i, 862.

**Phenylacetylene-ethylpropylcarbinol** (Brachin), 1907, A., i, 129.

**Phenylacetylenyldimethylcarbinol,** synthesis of, and its acetyl derivative (Skosarewsky), 1905, A., i, 774.

**Phenyacetylenylmethyl*tert.*-butylcarbinol,** synthesis of (Newerowitsch), 1905, A., i, 775.

**Phenylacetylenylmethylethylcarbinol,** synthesis of (Bork), 1905, A., i, 774.

**Phenylacetylenylmethyl*iso*propylcarbinol,** synthesis of (Bork), 1905, A., i, 774.

**3-Phenylacetyl-5-formyl*di*aminobenzoic acid,** *m*-amino-, preparation of derivatives of (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 768.

**Phenylacetylglycolyl-*α*-cyanoacetic acid,** ethyl ester. See Phenylacetoxyacetyl-α-cyanoacetic acid, ethyl ester.

**Phenylacetyl-*γ*-homocholine** and its salts (Menge), 1912, A., i, 949.

**Phenylacetylhomopiperonylamine** (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 1015.

**Phenylacetyl-*β*-3-methoxy-4:5-methylenedioxyphenylethylamine** (Salway), 1910, T., 1213.

**Phenylacetyl-*α*- and -*β*-methylcholines** and their salts (Menge), 1912, A., i, 949.

**Phenylacetyl-*β*-phenylethylamine** (Decker and Kropp), 1909, A., i, 513; (Pictet and Kay), 1909, A., i, 514.

**Phenylacetylphenylhydrazide,** α-cyano- (Hessler), 1908, A., i, 183.

**4-Phenylacetylpyridine-3-carboxylic acid** and its amide (Fels), 1904, A., i, 618.

**Phenylacetylquinol,** methyl ethers of (Kauffmann and Grombach), 1906, A., i, 286.

**Phenylacetylsemicarbazide** (Rupe and Fiedler), 1912, A., i, 143.

**Phenylacetyl*di*thiocarbamic acid,** esters (Johnson, Bateman, Palmer, and Brautlecht), 1906, A., i, 954.

**Phenylacetyltropeine,** salts of (Jowett and Pyman), 1909, T., 1028.

**Phenylacetylurethane** (Diels), 1903, A., i, 325.

**5-Phenylacridine** and its halogen derivatives, action of bromine on, and the methylation and salts of the products (Dunstan and Hilditch), 1907, T., 1659; P., 206.

**5-Phenylacridine,** chromate of, and 2:8-*di*amino- and its additive salts, and bromo- and chloro-derivatives (Dunstan and Oakley), 1906, A., i, 383.
  meth- and eth-iodides (Decker, Gadomska, Sandberg, and Stavrolopoulos), 1905, A., i, 375.
  derivatives of (Ullmann and Broido) 1906, A., i, 188; (Ullmann and Ernst), 1906, A., i, 205; (Kehrmann and Stépanoff), 1909, A., i, 54; (Kaufman, Albertini, and Holsboer), 1909, A., i, 606.
  methyl derivatives of (Schmid and Decker), 1906, A., i, 305.

**5-Phenylacridine,** 3-amino-, and its acetyl derivative, 3:7-*di*amino-, 3-nitro-, and 3-nitro-7-amino- (Ullmann and Ernst), 1906, A., i, 205.
  1:3-*di*amino-, and its diacetyl derivative, 1:3-*di*nitro-, 1:3-*di*nitro-7-amino-, and 1:3-*di*nitro-9-hydroxy- (Ullmann and Broido), 1906, A., i, 189.
  2:*p*-*di*amino- (*chrysaniline*), acetylation and methylation of (Dunstan and Hewitt), 1906, T., 482; P., 73.
  *p*-amino-2-hydroxy-. See Chrysophenol.
  *p*-bromo-, and its salts (Dunstan and Stubbs), 1906, A., i, 698.
  *di*bromo-, methobromide of (Kaufmann, Widmer, and Albertini), 1911, A., i, 749.
  *o*- and *p*-hydroxy-, and their salts (Landauer), 1904, A., i, 927.

**10-Phenylacridine** *per*chlorate (Vorländer), 1906, A., i, 906.

**5-Phenylacridine-*o*-carboxylic acid,** methylation of (Decker and Hock), 1904, A., i, 450.
  quaternary salts, action of amines on (Decker and Schenk), 1906, A., i, 304.
  ethyl ester, and its additive derivatives (Decker and Schenk), 1906, A., i, 304.

**10-Phenylacridinium compounds** (Ullmann and Maag), 1907, A., i, 638.

**10-Phenylacridone** (Goldberg and Nimerovsky), 1907, A., i, 621.

**Phenylacrylamide,** α-cyano-*p*-hydroxy- (Sclavi), 1911, A., i, 398.

**α-Phenylacrylic acid.** See Atropic acid.

**Phenylacylamines,** hydrazones of (Busch and Hefele), 1911, A., i, 582.

**2-Phenyladenine** (Traube and Herrmann), 1904, A., i, 633.

*β*-**Phenylæsculetin** and its derivatives (Bargellini and Martegiani), 1912, A., i, 292.
*dl*-**Phenylalaninamide** (Koenigs and Mylo), 1909, A., i, 88.
**Phenylalanine**, synthesis of (Wheeler and Hoffman), 1911, A., i, 499.
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  derivatives of (Fischer and Blank), 1907, A., i, 684.
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  esters and their additive salts (Curtius and Müller), 1904, A., i, 481.
    reduction of (Fischer and Kametaka), 1909, A., i, 213.
  detection of, and its picrate and picrolonate (Mayeda), 1907, A., ii, 591.
**Phenylalanine**, 3:5-*di*bromo-, and its ethyl ester and salts (Wheeler and Clapp), 1908, A., i, 897.
  *m*-chloro- (Flatow), 1910, A., ii, 321.
  *p*-chloro-, and its hydrochloride and benzoyl derivative (Friedmann and Maase), 1910, A., ii, 794.
  *p*-iodo-, and its derivatives (Wheeler and Clapp), 1908, A., i, 981.
    derivatives of (Abderhalden and Brossa), 1909, A., i, 800.
*l*-**Phenylalanine**, derivatives of (Fischer and Schoeller), 1907, A., i, 1037.
*dl*-**Phenylalanine**, 3:4-*di*hydroxy- (Funk), 1911, T., 557; P., 56.
  2:4-*di*nitro- (Abderhalden and Blumberg), 1910, A., i, 371.
*β*-**Phenylalanine**, compounds of, with hippurylazoimide (Curtius and Müller), 1904, A., i, 887.
*dl*- and *l*-**Phenylalanines**, picronolates of (Levene and van Slyke), 1912, A., i, 682.
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*l*-**Phenylalanylglycine** (Fischer and Schoeller), 1907, A., i, 1038.
**Phenyl** *p*-**aldehydostyryl ketone** (p-*aldehydobenzylideneacetophenone*) (v. Lendenfeld), 1907, A., i, 221.
**Phenylalkylamines** and **phenylalkylammonium bases**, biological behaviour of (Hildebrandt), 1907, A., ii, 496.
**Phenylalkylamines**, *o*-*di*hydroxy-, optically inactive, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 372, 664.
**Phenylalkylcamphorylmethanes** (Haller and Bauer), 1906, A., i, 441.
**Phenyl alkyl ketones**, preparation of acids and amides from (Willgerodt and Merck), 1909, A., i, 716.
**Phenylalkylnitroamines**, *tri*nitro- (Franchimont), 1910, A., i, 617.
**Phenylalkylnitrosoamines**, *p*-diazonium compounds of (Badische Anilin- & Soda-Fabrik), 1904, A., i, 1063.
**Phenylalkyloxyacetic acids**, possible intramolecular change in the inactive (Turner), 1909, P., 201.
**1-Phenyl-4-alkyl-3:5-pyrazolidones** (Michaelis and Schenk), 1909, A., i, 58.
*α*-**Phenyl-*α*-alkylsulphone-*δ*-dimethylpentan-*γ*-ones** (Posner), 1904, A., i, 323.
**Phenylallene**, attempts to synthesise (Klages and Klenk), 1906, A., i, 638.
**Phenylallophanic acid**, methyl ester (Diels and Gollmann), 1911, A., i, 956.
*α*-**Phenylallyl alcohol**, bromide, chloride, chlorodibromide, and ethyl ether (Klages and Klenk), 1906, A., i, 638.
**Phenylallyl ozonide** (Harries and v. Riedenstein), 1912, A., i, 674.
**Phenylallylacetic acid**, resolution of, and *d*- and its *l*-menthylamine, and metallic salts (Pickard and Yates), 1909, T., 1016; P., 152.
**Phenylallylcarbinol**, synthesis of, and its oxidation (Klimenko), 1911, A., i, 444.
**Phenyl-*ψ*-allylchlorohydrin**, *di*hydroxy- (Böttcher), 1909, A., i, 153.
**Phenylallylthiocarbamide**, reactions of, with acyl chlorides (Dixon and Taylor), 1908, T., 24.
*N*-**Phenyl-*S*-allyl*di*thiourethane** (v. Braun), 1903, A., i, 15.
**Phenylamic acids**, action of phenylcarbimide on (Abati and Gallo), 1906, A., i, 944.
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**Phenylamino-.** See also Anilino-.
**Phenylaminoacetic acid**, optical resolution of (Ehrlich and Wendel), 1908, A., i, 269; (Fischer and Weichhold), 1908, A., i, 419; (Betti and Mayer), 1908, A., i, 639.
  copper salts of (Stadnikoff), 1907, A., i, 318.

**Phenylaminoacetic acid**, phthaloyl derivative (Ulrich), 1904, A., i, 529.
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**Phenylaminoacetic acid**, *o*-bromo- (Wislicenus and Fischer), 1910, A., i, 622.
*p*-bromo- (Wislicenus and Elvert), 1909, A., i, 31.
*p*-hydroxy- and its salts (Aloy and Rabaut), 1910, A., i, 558.
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*d*-**Phenylaminoacetic acid**, acetyl derivative, synthesis of, in the perfused liver (Neubauer and Warburg), 1911, A., ii, 52.
*l*-**Phenylaminoacetic acid** and its hydrochloride, phenylcarbimide, phenylhydantoin and *l*-diphenylhydantoin (Ehrlich and Wendel), 1908, A., i, 269.
*d*-camphorsulphonate, crystallography of (Panichi), 1912, A., ii, 551.
**Phenylaminoacetic acids**, optically active, action of nitrous acid on, and conversion of, into phenyl-halogenacetic acids (McKenzie and Clough), 1909, T., 791.
**5-Phenylaminoacetylamino-2:6-diketo-3-methyltetrahydropyrimidine**, 4-amino- (Farbenfabriken vorm. F. Bayer & Co.), 1909, A., i, 746.
**Phenylaminoacetyltropeine** and its dihydrobromide and dipicrate (Jowett and Pyman), 1909, T., 1025.
**Phenyl-1-aminoanthraquinonecarboxylic acid**, *di*bromo-, and chloro*di*bromo-, methyl esters (Badische Anilin- & Soda-Fabrik), 1912, A., i, 804.
**Phenyl-*p*-aminobenzeneazo-β-naphthol** and its 2- and 4-mono-, 2:4-*di*-, and 2:4:6-*tri*-nitro-derivatives (Morgan and Micklethwait), 1908, T., 609; P., 48.
**Phenyl-*p*-aminobenzenediazonium** chloride, 2:4-*di*nitro- (Morgan and Micklethwait), 1908, T., 610.
**1-Phenyl-4-*p*-aminobenzylhydantoin** and its salts (Johnson and Brautlecht), 1912, A., i, 805.
**Phenylaminocamphor** and its nitroso-derivative and *p*-hydroxy- and *p*-chloro- (Forster and Thornley), 1909, T., 950.
**Phenylaminochlorophenylphenazonium** salts (Balls, Hewitt, and Newman), 1912, T., 1849.
**Phenylaminocrotonatebenzylideneacetoacetic acid**, ethyl ester (Knoevenagel, Erler, and Reinecke), 1903, A., i, 652.
**Phenylaminodimethylcarbinol** and its dibenzoyl derivative (Riedel), 1908, A., i, 769.
**Phenyl-4:4′-*di*aminodiphenylamine**, *p*-hydroxy- (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 1062.
**Phenyl*tetra*aminoditolylmethane**, *p*-amino-, and its acetyl derivative and *p*-nitro- (Ullmann and Grether), 1903, A., i, 447.
**Phenyl*di*-*p*-aminodi-*p*-xylylmethane** and *m*- and *p*-nitro-, and their diacetyl and dibenzoyl derivatives (Schultz and Peteny), 1907, A., i, 1075.
**Phenyl-α-aminoethylcarbinol** and its salts (Schmidt and Calliess), 1911, A., i, 742; (Calliess), 1912, A., i, 365.
**Phenyl-α-aminoethyl ketone** and its salts (Schmidt and Calliess), 1911, A., i, 742.
**Phenylaminoglyoxime** *per*oxide (Wieland), 1903, A., i, 770.
**Phenylaminoguanidine** hydrobromide (Pellizzari and Laria-Botte), 1911, A., i, 337.
**Phenyl-5-amino-2-hydroxybenzylethylamine** (Einhorn, Bischkopff, and Szelinski), 1906, A., i, 247.
**α-Phenyl-2-amino-3-hydroxy-4-methoxycinnamic acid** (Pschorr and Vogtherr), 1903, A., i, 184.
**Phenylaminoimino-oxalic methyl ethers** (Lander), 1904, T., 987; P., 132.
**4-Phenyl-2-aminomethylthiazole** hydrobromide (Johnson and Burnham), 1912, A., i, 305.
**Phenyl-2:4-*di*amino-α-naphthylamine** (Ullmann and Bruck), 1909, A., i, 22.
**Phenylamino-α-naphthylaminophenyl-** and **-chlorophenyl-phenazonium** nitrates (Balls, Hewitt, and Newman), 1912, T., 1850.
**Phenyl-8-aminonaphthylcarbamide** (Sachs), 1909, A., i, 432.
**Phenyl-8-aminonaphthylthiocarbamide** (Sachs), 1909, A., i, 431.
**1-Phenyl-5-aminophenylaminotriazole**, 3-thio-, and its diacetyl and dibenzylidene derivatives (Fromm and Baumhauer), 1908, A., i, 702.
**1-Phenyl-2-*p*-aminophenylbenziminazole**, 5:*p*-*di*amino-. See 1:2-Dianilinobenziminazole, 5-amino-.

**5-Phenyl-1-*o*-, -*m*-, and -*p*-amino- and -nitro-phenyl-2-methylpyrrole-3-carboxylic acids**, ethyl esters (Borsche and Titsingh), 1908, A., i, 104.
**5-Phenyl-2-*o*-** and **-*p*-aminophenyloxazoles** and their derivatives (Lister and Robinson), 1912, T., 1310.
**Phenyl α-aminopropyl ketone**, hydrochloride, picrate, and platinichloride of (Hildesheimer), 1910, A., i, 891.
**Phenyl-γ-aminopropylsulphone** hydrochloride (Gabriel and Colman), 1912, A., i, 116.
**Phenyl-*o*-aminotolyliodinium** hydroxide and salts, and their *N*-acetyl derivative (Willgerodt and Heusner), 1907, A., i, 1026.
**Phenylammonium** osmichloride (Gutbier and Walbinger), 1911, A., i, 191.
  platinibromide (Gutbier, Bauriedel, and Obermaier), 1911, A., i, 33.
**ε-Phenylamyl alcohol** and its acetate (v. Braun, Deutsch, and Kruber), 1911, A., i, 968.
**ε-Phenylamyl** chloride, *p*-nitro- (v. Braun and Deutsch), 1912, A., i, 846.
  mercaptan (v. Braun), 1912, A., i, 552.
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**ε-Phenylamylamine**, and its derivatives (v. Braun), 1910, A., i, 844; (Merck), 1912, A., i, 110.
**9-Phenyl-9-*iso*amyl-10-anthrone** and *mono-* and *di*-hydroxy-, and their acetyl derivatives (Jüngermann), 1905, A., i, 795.
***s*-Phenyl-*sec.*-amylcarbamide** (Mailhe), 1905, A., i, 635.
**9-Phenyl-9-*iso*amyldihydroanthracene** and 10-bromo- (Jüngermann), 1905, A., i, 796.
**ε-Phenylamyldimethylamine** and its picrate (v. Braun), 1911, A., i, 613.
**ε-Phenylamyldimethylamine**, *p*-amino-, *p*-hydroxy-, and its salts, and *p*-nitro- (v. Braun and Deutsch), 1912, A., i, 846.
**Phenylamyldisulphone-ethane** and **-methane** (Posner and Hazard), 1903, A., i, 243.
**Phenylamylene** (v. Braun), 1911, A., i, 613.
**β-Phenyl-$\Delta^{\alpha}$-amylene** (*α-isopropylvinylbenzene*) and its dibromide (Klages), 1904, A., i, 28; (Tiffeneau), 1907, A., i, 406.
**β-Phenyl-$\Delta^{\beta}$-amylene** and its dibromide (Klages and Hahn), 1903, A., i, 19.
**γ-Phenyl-$\Delta^{\beta}$-amylene** (*α-ethylpropenylbenzene*) (Tiffeneau), 1907, A., i, 406.
  and its bromo- and nitroso-chloride derivatives (Klages), 1904, A., i, 28.
**Phenylamylenes**, iodohydrins of, and their reactions with silver nitrate (Tiffeneau), 1906, A., i, 966.
***d*-Phenylamylhydrazine** and its hydrochloride and tartaric derivatives (Neuberg and Federer), 1905, A., i, 299, 300.
**Phenyl amyl ketone** and its semicarbazone (Schroeter), 1907, A., i, 531.
**Phenyl *iso*amyl ketone** and its oxime and semicarbazone, and physical constants of (Paternò and Traetta-Mosca), 1909, A., i, 487.
***s*-Phenyl*iso*amyloxymethylthiocarbamide** (Johnson and Guest), 1909, A., i, 371.
**3-Phenyl-5-amylpyrazole** (Moureu and Brachin), 1903, A., i, 581.
**1-Phenyl-3-amylpyrazoline**, 5-imino- (Moureu and Lazennec), 1907, A., i, 159.
**Phenyl β-*iso*amylthiol-γ-benzylidenepropyl ketone** (Ruhemann), 1905, T., 24.
**ε-Phenylamyl*di*thiourethane** (v. Braun), 1912, A., i, 552.
**1-Phenyl-2-*iso*amylurazole** (Brunel and Acree), 1910, A., i, 521.
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**Phenylangelicalactone**, constitution of (Thiele and Wedemann), 1906, A., i, 725.
***p*-Phenylanilinomalonic acid**, ethyl ester (Fortinsky), 1912, A., i, 770.
***N*-Phenyl-*p*-anisaldoxime** (Plancher and Piccinini), 1905, A., i, 705.
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  hydrogen *tri-* and *penta*-iodide (Beckmann, Ebert, Netscher, and Schulz), 1909, A., i, 653.
**Phenyl-*p*-anisidine**, *tri*bromo- (Wieland and Wecker), 1910, A., i, 243.
**Phenyl-*p*-anisylacetic acid** (Pointet), 1909, A., i, 235.
  *o*-hydroxy-, lactone of (Stoermer and Decker), 1911, A., i, 665.
**Phenylanisylacetylene** (Moureu and Brachin), 1903, A., i, 581.
**δ-Phenyl-α-anisyl-$\Delta^{\alpha}$-butene-γδ-dianil** (Borsche and Titsingh), 1910, A., i, 65.

**α-Phenyl-δ-anisyl-$\Delta^{\alpha}$-butene-γδ-dianil** (Borsche and Titsingh), 1910, A., i, 66.

**5-Phenyl-7-anisyl-2:3-dihydro-4-pyrindene**, salts of (Striegler), 1912, A., i, 782.

**α-Phenyl-α-*p*-anisylethyl alcohol**, *o*-amino- (Stoermer and Gaus), 1912, A., i, 1026.

**Phenyl-*p*-anisylethylene**, *o*-amino-, and its platinichloride (Stoermer and Gaus), 1912, A., i, 1026.

*di*bromo- (Busignies), 1910, A., i, 668.

**Phenyl-*o*- and -*p*-anisylethylenes**, and their ω-bromo- and ω-chloro-derivatives (Stoermer and Simon), 1905, A., i, 53.

**α-Phenyl-*b*-anisylethylthiocarbamide** (Busch and Leefhelm), 1908, A., i, 153.

**Phenyl-*p*-anisylglycidic acid** and its ethyl ester (Pointet), 1909, A., i, 234.

**β-Phenyl-β-*o*-anisylhydracrylic acid** and its ethyl ester and barium salt (Stoemer and Friderici), 1908, A., i, 180.

**1-Phenyl-4-anisylidenehydantoin** (Wheeler and Hoffman), 1911, A., i, 500.

2-thio-, and its sodium salt (Wheeler and Brautlecht), 1911, A., i, 500.

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**Phenylanisylidene-*p*-phenylenediamine** and its hydrochlorides (Moore and Woodbridge), 1908, A., i, 686.

**Phenylanisyliodoethylene** (Stoermer and Friderici), 1908, A., i, 179.

**β-Phenyl-β-anisyl-α-methylhydracrylic acid** and its methyl ester and amide (Stoermer, Friderici, Bräutigam, and Neckel), 1911, A., i, 297.

**5-Phenyl-2-anisyloxazole** and its picrate (Lister and Robinson), 1912, T., 1304.

**2-Phenyl-5-anisyloxazole** (Lister and Robinson), 1912, T., 1305.

**5-Phenyl-3-anisyl*iso*oxazole**, 4-amino- and 4-nitro- (Wieland and Bloch), 1905, A., i, 707.

**α-Phenyl-α-anisylpropene** and β-bromo- (Hell and Stockmayer), 1904, A., i, 241.

**β-Phenyl-β-anisylpropionic acid** (Stoermer and Friderici), 1908, A., i, 179.

**1-Phenyl-5-anisylpyrazole-3-carboxylic acid** and its copper salt (Bauer and Dieterle), 1911, A., i, 921.

**2-Phenyl-6-anisylpyridine** (Scholtz and Meyer), 1910, A., i, 562.

**3-Phenyl-2-*p*-anisylquinoline-4-carboxylic acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1018.

**Phenylanisylthiocarbamide** (v. Braun and Deutsch), 1912, A., i, 694.

**δ-Phenyl-β-*o*-anisylthiosemicarbazide**, and its *m*-nitrobenzylidene derivative (Busch and Reinhardt), 1910, A., i, 77.

**Phenyl-*p*-anisyl-3:4-*gem*-triazolo*iso*oxazole** (Wieland, Gmelin, and Roseeu), 1910, A., i, 785.

**Phenyl anisyl triketone** and its oxime (Wieland and Bloch), 1904, A., i, 597.

**Phenylanthramine** (Padova), 1909, A., i, 655.

**Phenylanthranil**(2-*phenyl-ψ-benzoxazole*) (Bamberger and Lindberg), 1909, A., i, 511.

**Phenylanthranilic acid**. See Diphenylamine-2-carboxylic acid.

**Phenylanthranol**, iodo-hydriodo-derivative (Liebermann and Mamlock), 1905, A., i, 531.

**Phenylanthraquinomethane**, ω-chloro- (Padova), 1909, A., i, 655.

**2-Phenylanthraquinone** (Scholl and Neovius), 1911, A., i, 452.

**Phenylanthraquinone chloride**, *di*chloro- (Scharwin, Naumoff, and Gandurin), 1904, A., i, 1032.

**1:2-Phenylanthraquinoneiminazole** and 4-amino- (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 140.

**Phenyl-1- and -2-anthraquinonylcarbamide** (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 469, 995.

**Phenyl-2-anthraquinonylthiocarbamide** (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 469.

**2-Phenyl-9-anthrone** (Scholl and Neovius), 1911, A., i, 452.

**Phenylanthrone salts** (Liebermann, Glawe, and Lindenbaum), 1904, A., i, 901.

**2-Phenylanthroxan**, 4-chloro-*p*-hydroxy-, and its acetyl derivative (Zincke and Siebert), 1906, A., i, 515.

**Phenyl*iso*antipyrylthiocarbamide** (Michaelis and Wrede), 1907, A., i, 251.

**Phenylarsenic** oxide, *p*-amino-, and its acetyl derivative, halogen salts of (Bertheim), 1911, A., i, 593.

**Phenylarsenic** oxide, 3-amino-4-hydroxy-, and its hydrochloride (Ehrlich and Bertheim), 1912, A., i, 523.
  *sesqui*sulphide, *p*-amino-, acetyl derivative (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 280.
**Phenylarsenious oxide and arsenobenzene**, preparation of derivatives of, and 4-amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 347.
**Phenylarsenious oxide**, aminohydroxy- (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 1055.
  *p*-hydroxy- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 148.
  *p*-iodo- (Mameli and Patta), 1910, A., i, 531.
**Phenylarsenious sulphide**, *p*-amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 280.
**Phenylarsine**, *p*-amino-, *tetra*iodide hydriodide (Patta and Caccia), 1911, A., i, 1054.
**Phenylarsinic** iodide, *m*-nitro-*p*-amino- (Mameli), 1909, A., i, 980.
  oxide, *p*-amino-, condensation product of, with *β*-naphthaquinonesulphonic acid (Ehrlich, Bertheim, and Schmitz), 1910, A., i, 452.
**Phenylarsinic acid** and its derivatives, reduction products of (Ehrlich, Bertheim, and Schmitz), 1910, A., i, 451.
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  preparation of quinine and cinchonine salts of (Vereinigte Chemische Werke Aktien-Gesellschaft), 1909, A., i, 253.
**Phenylarsinic acid**, amino-, structure of (Bertheim and Benda), 1912, A., i, 62.
    an isomeric (Bertheim), 1908, A., i, 590.
  *o*-amino-, and its barium and silver salts (Benda), 1912, A., i, 63.
  *m*-amino- (m-*arsanilic acid*), preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 448.
  *p*-amino- (*arsanilic acid*), and its acetate and their sodium salts (Ehrlich and Bertheim), 1907, A., i, 812.
**Phenylarsinic acid**, *p*-amino- (*arsanilic acid*), reduction products of (Ehrlich, Bertheim, and Schmitz), 1911, A., i, 593.
    carbamide and thiocarbamide derivatives of (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 148.
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  3:4-*di*amino- (Bertheim), 1911, A., i, 1055.
  3-amino-4-hydroxy-, and its sodium salt (Erhlich and Bertheim) 1912, A., i, 523.
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    and its sodium salt (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 596.
  *mono*- and *di*-bromo-*p*-amino-, *di*chloro-*p*-amino-, and *mono*- and *di*iodo-*p*-amino- (Bertheim), 1910, A., i, 346.
  4-chloro-*o*-amino- (Benda), 1910, A., i, 148.
  4-chloro-3-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 595.
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    and its derivatives, pharmacological action of (Mameli and Patta), 1911, A., ii, 911, 912.
    biochemical investigations of (Blumenthal and Herschmann), 1908, A., ii, 878.
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**Phenylarsinic acid**, nitro-, structure of (Bertheim and Benda), 1912, A., i, 62.
5-nitro-2-amino-, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 595.
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nitro-4-amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 594, 760.
3-nitro-4-amino- (Mameli), 1909, A., i, 980.
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3-nitro-4-hydroxy-, 3:5-*di*nitro-4-hydroxy-, and their derivatives (Benda and Bertheim), 1912, A., i, 63; (Benda), 1912, A., i, 64.
*p*-nitroso- (Karrer), 1912, A., i, 740.
**Phenylarsinic acid-3-trimethylammonium** hydroxide, 4-hydroxy-, and its iodide (Bertheim), 1912, A., i, 819.
**Phenylarsinoacetic acid**, *p*-amino- (Ehrlich, Bertheim, and Schmitz), 1910, A., i, 452.
**Phenyl aryl ketones**, fission of, by sodamide (Ramart-Lucas), 1909, A., i, 488.
**Phenylasparagine**, 2:4-*di*nitro- (Abderhalden and Blumberg), 1910, A., i, 371.
**γ-Phenylaticonic acid**, configuration of (Stobbe and Horn), 1909, A., i, 31.
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**Phenylation** in presence of copper as a catalyst (Goldberg), 1906, A., i, 426.
**Phenylauramine**, 4-nitro-, 2:4-*di*nitro-, and 2:4:6-*tri*nitro-, and their hydrochlorides (Semper), 1911, A., i, 580.
**Phenylauramines**, amino-derivatives of (Grandmougin and Lang), 1909, A., i, 974.
**Phenylaziminobenzene.** See 1-Phenyl-1:2:3-benzotriazole.
**Phenyl-ψ-aziminobenzene.** See 2-Phenyl-2:1:3-benzotriazole.
**Phenyl-2-aziminonaphthalene 5:7-disulphonic acid**, *p*-nitro- and *p*-amino- (Gesellschaft für Chemische Industrie in Basel), 1910, A., i, 207.
**Phenyl-2-azimino-5-naphthol-7-sulphonic acid**, *p*-amino-, preparation of (Gesellschaft für Chemische Industrie in Basel), 1910, A., i, 206.
**3:4-Phenylazimino-5-phenyl*iso*oxazole.** See Diphenyl-3:4-*gem*-triazolo*iso*oxazole.
**Phenylaznitrosobenzene**, amino-, and its acetyl derivative (Werner and Peters), 1906, A., i, 221.
**Phenylaznitrosobenzenecarboxylic acid** and its ethyl ester, hydrazide, and azoimide (Werner and Peters), 1906, A., i, 220.
**Phenylaznitrosobenzeneurethane** (Werner and Peters), 1906, A., i, 221.
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**Phenylazoacetaldoxime** (Bamberger and Pemsel), 1903, A., i, 283, 284.
**Phenylazoacetoacetamide** (Feist), 1906, A., i, 332.
**Phenylazoacetoacetic acid**, and *p*-bromo- and *p*-chloro-, menthyl esters (Lapworth), 1903, T., 1120; P., 149.
ethyl ester, action of *p*-nitrobenzaldehyde on (Prager), 1903, A., i, 540.
benzoylhydrazone of, and the action of alkali on (Bülow and Schaub), 1908, A., i, 705.
**Phenylazocyanoacetic acid**, ethyl ester, isomerism of the so-called (Hantzsch and Thompson), 1905, A., i, 615.
**Phenylazocyanoacetic acid**, *p*-bromo-, menthyl ester, rotation of (Bowack and Lapworth), 1903, P., 23; 1904, T., 45.
**Phenylazocyanoacetic acids**, α- and β-, ethyl esters (Weissbach), 1903, A., i, 541.
**Phenylazo-2:4-diethoxybenzoylacetone** (Bülow and Sautermeister), 1904, A., i, 262.
**Phenylazoethane**, action of zinc ethyl on (Tichwinsky), 1905, A., i, 93.
reactions of (Bamberger and Pemsel), 1903, A., i, 282.
**Phenylazoformaldoxime** and *o*-chloro- (Busch and Wolbring), 1905, A., i, 494.
**Phenylazoformaldoxime**, *p*-nitro- (Busch and Meussdörffer), 1907, A., i, 349.
**Phenylazoformamide**, *p*-amino-, and its hydrochloride and its *N*-benzoyl and 3:5(?)-dibromo-derivatives (Borsche and Reclaire), 1907, A., i, 988.
*p*-hydroxy-, and its 3:5-dibromo-, ethyl, and benzoyl derivatives (Borsche and Zeller), 1904, A., i, 1056.
**Phenylazoformanilide**, *p*-amino-, and its additive salts, and benzoyl, phenylcarbamido-, and dibromo-derivatives (Borsche and Reclaire), 1907, A., i, 989.

*γ*-**Phenylazoglutaconic acid**, ethyl ester, phenylhydrazone of (Henrich and Thomas), 1908, A., i, 114.

1-**Phenylazo-3:5-*di*hydroxy-6-mono- and 6:6-di-methyl-1:6-dihydro-1:2:4-triazines**, *m*-nitro- (Bailey and Knox), 1907, A., i, 801.

**Phenylazoimide**, new method of preparing (Darapsky), 1907, A., i, 729.
  action of, with aniline and with *p*-toluidine (Wolff), 1912, A., i, 1028.
  condensation of, with ketones (Dimroth, Frisoni, and Marshall), 1907, A., i, 97.
  condensation product of, with 1-phenyl-3-methyl-5-pyrazolone, constitution, and derivatives of (Heiduschka and Rothacker), 1909, A., i, 851.
  addition of, to quinones (Wolff and Grau), 1912, A., i, 1034.
  synthesis of tetrazoles from (Dimroth and Merzbacher), 1907, A., i, 659.

**Phenylazoimide**, *o*- and *m*-bromo- (Dimroth and Pfister), 1910, A., i, 904.
  *s*-*tri*bromo- (Forster and Fierz), 1907, T., 1952.
  4:6-*di*bromo-2-hydroxy- (Orton, Evans, and Morgan), 1907, P., 167.
  *o*- and *m*-hydroxy-, and their metallic and acyl derivatives (Forster and Fierz), 1907, T., 1350; P., 205.
  *p*-hydroxy-, and its benzoyl, *m*-nitrobenzoyl, and potassium derivatives and methyl ether, and 3-nitro-4-hydroxy-, and its benzoyl and potassium derivatives (Forster and Fierz), 1907, T., 859; P., 112.
  *p*-nitro- (Bresler, Friedemann, and Mai), 1906, A., i, 322.

**Phenylazoimides**, condensation of, with pyrazolones (v. Walther and Rothacker), 1906, A., i, 911.

**Phenylazo-*p*-nitrobenzylideneacetone**. See Styryl phenylazomethyl ketone, *p*-nitro-.

*p*-**Phenylazo-oxanilide** (Suida), 1911, A., i, 365.

1-**Phenyl-3-azophenyl-thiobiazolone, -*di*thiobiazolone, and -2-thioaziethane** (Ormerod), 1906, P., 206.

**Phenylazothiolacetic acid**, *p*-nitro-, and its sodium salt (Friedländer and Chwala), 1907, A., i, 526.

*β*-**Phenylazo*iso*valeric acid** and its reduction (Prentice), 1904, T., 1667; P., 220.

**Phenylazoxime**, amino-, and its silver salt (Wieland and Bauer), 1907, A., i, 492.

5-**Phenylbarbituric acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1025.

**Phenylbenzaldoxime** and *m′*-nitro- (Plancher and Piccinini), 1905, A., i, 705.

**Phenyl-*o*-benzdi-iminazole**, 2:5-*di*-*p*-amino-, and its diacetyl derivative (Kym and Kowarski), 1911, A., i, 1044.

**Phenylbenzdioxazole**, 1:5-*di*-*p*-amino-, and 1:5-*di*-*p*-nitro- (Kym and Kowarski), 1911, A., i, 1045.

*a*-**Phenylbenzeneazo-coumarin** and its sulphonic acid, **-*p*-hydroxycinnamic acid**, **-*m*-** and **-*p*-hydroxy-*β*-phenylpropionic acids**, and **-melilotic acid** and its sulphonic acid (Borsche and Streitberger), 1904, A., i, 1064.

5-**Phenyl-4-benzeneazo*iso*oxazole-3-carboxylic acid** and its ethyl ester (Bülow), 1904, A., i, 623.

5-**Phenyl-4-benzeneazopyrazole-3-carboxylic acid** and its ethyl ester (Bülow), 1904, A., i, 624.

1-**Phenyl-5-benzeneazo-6-pyridazone-3-carboxylic acid**, ethyl ester (Henrich and Thomas), 1908, A., i, 114.

**Phenylbenzenylamidine** (Busch and Hobein), 1907, A., i, 1076.
  *as*-and *s*-acyl derivatives of (Wheeler, Johnson, and McFarland), 1903, A., i, 859.

**Phenylbenzenylamidine**, *o*- and *m*-chloro-, and their derivatives (v. Walther and Grossmann), 1909, A., i, 56.
  *p*-chloro-, and its salts, acyl, carbamide, and thiocarbamide derivatives, and thiocyanate, and the action of picryl chloride and of hydroxylamine hydrochloride on (v. Walther), 1903, A., i, 582.

**Phenylbenzenylamino-oxime**, *p*-chloro-, and its salts (v. Walther), 1903, A., i, 583.

**Phenylbenzenylamino-oximes**, *o*- and *m*-chloro- (v. Walther and Grossmann), 1909, A., i, 56.

**Phenylbenzenylhydrazidine** and its hydrochloride (Voswinckel), 1903, A., i, 777.

**Phenylbenzenylphenylaminoamidine** and its isomeride (Wheeler and Johnson), 1904, A., i, 628.

**Phenylbenzenylphenylhydrazine**, *o*- and *m*-chloro- (v. Walther and Grossmann), 1909, A., i, 56.

**Phenylbenzhydrylthiocarbamide** (v. Braun and Deutsch), 1912, A., i, 694.

**1-Phenylbenziminazole,** 5-amino-, and its acetyl derivative and salts, and 5-nitro-, and the 2-carboxylic acid of the nitro-compound and its ethyl ester (Reissert and Goll), 1905, A., i, 248.

5-nitro-, and its salts (v. Walther and Kessler), 1906, A., i, 899.

**2-Phenylbenziminazole,** synthesis of (Pawlewski), 1903, A., i, 661.

**2-Phenylbenziminazole,** 6-chloro-, and its carbinol, 6-chloronitro-, and 6-nitro- (Fischer and Limmer), 1906, A., i, 897.

**Phenylbenziminazolecarboxylic acid.** See Benziminazolebenzoic acid.

**Phenylbenzoic acids.** See Diphenylcarboxylic acids.

**Phenylbenzometoxazine.** See Phenyldihydro-1:3-benzoxazine.

**6-Phenyl-1:2:3-7:9-benzopentazole,** 4-hydroxy- (Bülow), 1910, A., i, 81.

**4-Phenylbenzophenone** chloride (Norris, Thomas, and Brown), 1911, A., i, 32.

*o*-**Phenylbenzophenonethiocarbamide** (Carré), 1909, A., i, 262.

**2-Phenyl-1:4-benzopyranol,** 7-hydroxy-, anhydrohydrochloride and platinichloride of (Perkin and Robinson), 1907, P., 149 ; 1908, T., 1098.

**2-Phenyl-1:4-benzopyranol-4-carboxylic acid,** 7-hydroxy-, and its lactone and ester, and diacetate of the ester (Bülow and Wagner), 1903, A., i, 647.

**2-Phenylbenzopyronium** salts (Decker and v. Fellenberg), 1907, A., i, 1065.

ferrichloride, 7-hydroxy- (Decker and v. Fellenberg), 1909, A., i, 117.

**2-Phenylbenzopyrylium** salts, 7-hydroxy- (Decker and v. Fellenberg), 1907, A., i, 950.

**Phenylbenzoquinone.** See Diphenylquinone.

**5-Phenyl-1:2:4:9-benzotetrazole,** 7-hydroxy- (4-*hydroxy*-6-*phenyl*-2:3:7:0-*diazpyridazine*) (Bülow and Weber), 1909, A., i, 615.

**2-Phenyl-1:2:4-benzotriazine,** imino-*m*-cyano-amino-, and its hydrochloride (Pierron), 1908, A., i, 925.

**1-Phenyl-1:2:3-benzotriazole,** 5-amino-, and 5-nitro- (Delétra and Ullmann), 1904, A., i, 271.

7-amino-, 4-chloro-7-amino-, 7-nitro-, and *o*:*p*-*di*nitro- (Borsche and Rantscheff), 1911, A., i, 331.

**1-Phenyl-1:2:3-benzotriazole,** 5-amino-1-*p*-amino-, 5-amino-1-*p*-nitro-, 4-bromo-5-hydroxy-, 4-chloro-5-amino-, 4-chloro-5-amino-1-*p*-amino-, 4-chloro-5-amino-1-*p*-nitro-, 4-chloro-5-hydroxy-, 4:6:3′:5′-*tetra*chloro-5:4′-*di*hydroxy-, 5-hydroxy-, 4:5-*di*hydroxy-, 4-nitro-5-nitroamino-, and their derivatives (Fries and Empson), 1912, A., i, 659.

7-hydroxy- (Wolff and Grau), 1912, A., i, 1034.

*p*-hydroxy- (Ullmann and Fukui), 1908, A., i, 298.

**2-Phenyl-1:2:3-benzotriazole,** 5-amino-, change of the colour of fluorescence of, with the solvent (Ley and v. Engelhardt), 1908, A., ii, 746.

**2-Phenyl-2:1:3-benzotriazole** (*phenyl*-ψ-*aziminobenzene*), ketochlorides and quinones of (Zincke and Scharff), 1910, A., i, 140.

**2-Phenyl-2:1:3-benzotriazole,** 5-amino-, 6-chloro-5-nitro-, 4:5:7-*tri*chloro-6-hydroxy-, and 4:5-*di*chloro-6:7-*di*hydroxy- (Zincke and Scharff), 1910, A., i, 141.

5:6-*di*amino-, 4-bromo-5-hydroxy-, 4-chloro-5-amino-, *di*chloroamino-, 4-chloro-5-hydroxy-, 4:7-*di*chloro-5:6-*di*hydroxy-2-chloro-, 5-hydroxy-, 4:5-*di*hydroxy-, 5-nitro-6-amino-, 4-nitro-5-hydroxy-, 4-nitroso-5-hydroxy-, and their derivatives (Fries and Roth), 1912, A., i, 657.

*p*-hydroxy- (Elbs and Keiper), 1903, A., i, 662 ; (Grandmougin), 1907, A., i, 167.

4-nitro- (Borsche and Rantscheff), 1911, A., i, 331.

**1-Phenyl-1:2:3-benzotriazolecarboxylic acid** and its ethyl ester (Werner and Peters), 1906, A., i, 221.

**2-Phenyl-2:1:3-benzotriazole-5-diazonium sulphate** (Fries and Roth), 1912, A., i, 657.

**1-Phenyl-1:2:3-benzotriazole-5-sulphonic acid** (Schwalbe and Wolff), 1910, P., 340 ; 1911, T., 107.

**2-Phenyl-1:3-benzoxazine-4-one** (Titherley), 1910, T., 200 ; P., 9.

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**2-Phenyl-1:3-benzoxazine-4-one,** 6-bromo- (Hughes and Titherley), 1910, P., 344 ; 1911, T., 27.

6-chloro- (Titherley and Hughes), 1910, T., 1376 ; P., 175.

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**2-Phenyl-1:3-benzoxazine-4-one**, 2-hydroxy-, benzoyl derivative (McConnan and Titherley), 1906, T., 1338; P., 239.

**1-Phenylbenzoxazole**, 3-hydroxy- (Henrich and Opfermann), 1904, A., i, 934.

5-hydroxy- (Henrich and Wagner), 1903, A., i, 89.

**2-Phenylbenzoxazole** and its derivatives (Fischer and Römer), 1906, A., i, 541.

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**2-Phenyl-1:3-benzoxazone** and its 1-acetyl derivative (Keane and Nicholls), 1907, T., 266; P., 36.

**Phenylbenzoyl-.** See also Benzoylphenyl-.

*p*-**Phenylbenzoyl cyanide** (Vorländer, Friedberg, van der Merve, Rosenthal, Huth, and v. Bodecker), 1911, A., i, 866.

α-**Phenylbenzoylacetic acid**, 2:4-*di*nitro-, ethyl ester (Borsche), 1909, A., i, 233.

**4-Phenyl-2-benzoylaminomethylthiazole** (Johnson and Burnham), 1912, A., i, 305.

**Phenylbenzoylcarbamide** (Riedel), 1912, A., i, 774.

**Phenyl α-benzoylphenyl-α-phenyl-*n*-propyl ketone** (Kohler), 1908, A., i, 777.

*N*-**Phenyl**-*S*-**benzoyl***di***thiourethane** (v. Braun), 1904, A., i, 90.

**1-Phenyl-benzsulphontriazine** (Ullmann and Gross), 1910, A., i, 886.

**Phenylbenzylacetone**, 4:4′-*di*chloro- (Straus, Krier and Lutz), 1910, A., i, 567.

**Phenylbenzyl-amine, -methylamine,** and **-aniline**, 2:4-*di*nitro- (Mulder), 1906, A., i, 491.

**Phenylbenzylaminoacetonitrile** (Knoevenagel and Klucke), 1904, A., i, 990.

**1-Phenylbenzylaminopyrrole-2:5-dibenzoic acid** and its silver salt and ethyl ester (Reissert and Engel), 1905, A., i, 900.

**Phenylbenzylamyldisulphonephenylmethane** (Posner and Hazard), 1903, A., i, 243.

**4-Phenyl-1-benzyl-3:5-*endo*anilo-4:5-dihydro-1:2:4-triazole** and its nitrate (Busch and Brandt), 1907, A., i, 261.

α-**Phenyl**-β-**benzyl**-δ-*o*-**anisyl**-$\Delta^{\alpha}$-**butylene** (Orechoff and Merrson), 1912, A., i, 621.

**5-Phenyl-5-benzylbarbituric acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1025.

**Phenyl-benzyl- and -methylbenzylbenzenylamidines** (Lander), 1903, T., 327; P., 16.

**2-Phenyl-1-benzylbenziminazole**, 6-chloro- and its dinitro-derivative (Fischer and Limmer), 1906, A., i, 895.

**Phenylbenzylbenzylidenehydrazine** (Michaelis), 1908, A., i, 471; (Goldschmiedt), 1908, A., i, 572.

**Phenylbenzyl-5-benzylidene-ψ-thiohydantoin** (Wheeler and Jamieson), 1903, A., i, 521.

β-**Phenyl**-γ-**benzylbutyrolactone**, α-hydroxy- (Späth), 1912, A., i, 978.

**Phenylbenzylcarbamic chloride**, reaction of, with phenylthiourea (Dixon and Taylor), 1907, T., 926; P., 120.

**Phenylbenzylcarbinol**, preparation of (Hell), 1904, A., i, 242.

**Phenylbenzylcyanoacetic acid**, ethyl ester (Hessler), 1904, A., i, 831.

**Phenylbenzyl-*p*-diethylaminobenzylidenehydrazine** (Sachs and Michaelis), 1906, A., i, 575.

*N*-**Phenyl**-α- and -*N*′-**benzyldihydrophenanthraphenazines** (Freund and Richard), 1909, A., i, 418.

**Phenylbenzyl-2:5-dimethoxyphenylcarbinol** (Kauffmann and Grombach), 1905, A., i, 281.

**Phenylbenzyldimethylammonium** chloride and hydroxide sulphonic anhydride (Badische Anilin- & Soda-Fabrik), 1911, A., i, 627.

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**Phenylbenzyldimethylammoniumdisulphonic acid**, sodium and calcium salts (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 852.

**Phenylbenzyldimethylammoniumsulphonic acid** (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 548.

**Phenylbenzyldisulphone-dimethylmethane, -ethane, -methane,** and **-phenylmethane** (Posner and Hazard), 1903, A., i, 243.

*dl*-, *d*-, and *l*-α-**Phenyl**-*N*-**benzylethylamines** and their salts (Parck), 1912, A., i, 759.

**Phenylbenzylethylcarbinol** and its chloride (Klages and Heilmann), 1904, A., i, 488.

**Phenylbenzylethyl-*n*-propylarsonium** *d*-camphor-β-sulphonate (WINMILL), 1912, T., 721.

**Phenylbenzylethylpropylsilicane,** preparation of (KIPPING), 1907, T., 221.
  sulphonation of (MARSDEN and KIPPING), 1908, T., 203 ; P., 12.

**1-Phenyl-3-benzylethylpyrazolone,** 4-cyano- (SMITH and THORPE), 1907, T., 1907.

**Phenylbenzylfluorene** (KLIEGL), 1905, A., i, 187.

**1-Phenyl-3-benzylformamidine,** 3-hydroxy-, and its salts (LEY and KRAFFT), 1907, A., i, 302.

**β-Phenyl-α-benzylglutaconic acid** and its barium and silver salts (FEIST and POMME), 1910, A., i, 39.

**8-Phenyl-7-benzylguanine** (TRAUBE and NITHACK), 1906, A., i, 216.

**1-Phenyl-4-benzylhydantoin,** 2-thio- (BRAUTLECHT), 1911, A., i, 922.

*s*-**Phenylbenzylhydrazine** and its hydrochloride (PONZIO and VALENTE), 1908, A., i, 458.
  and its salts, and acyl derivatives and their nitroso-derivatives (SCHLENK), 1908, A., i, 737.

*as*-**Phenylbenzylhydrazine** (OFNER), 1904, A., i, 818.
  action of, on carbamide (MILRATH), 1908, A., i, 581.
  diacetyl derivative (MILRATH), 1908, A., i, 1014.

**Phenylbenzylideneacetophenone.** See Phenyl phenylstyryl ketone.

*p*-**Phenylbenzylideneamino-α-alkylcinnamic acids,** esters, and their liquid crystals (VORLÄNDER and KASTEN), 1908, A., i, 641.

**Phenylbenzylideneazlactone,** action of phenyl mercaptan on (RUHEMANN), 1905, T., 468 ; P., 123.

**Phenylbenzylidene-*p*-benzoquinone,** 3:5:3′:5′-*tetra*bromo-4′-hydroxy-, and its sodium salt (ZINCKE and WOLLENBERG), 1909, A., i, 25.

**β-Phenyl-γ-benzylidenebutyric acid** (REIMER), 1907, A., i, 852.

**β-Phenyl-γ-benzylidenebutyric acid,** β-hydroxy-, methyl ester and its dibromide, and γ-bromo-β-hydroxy-, methyl ester (KOHLER and HERITAGE), 1910, A., i, 484.

**β-Phenyl-γ-benzylidenebutyrophenone.** See β-Phenyl-β-styrylpropiophenone.

**β-Phenyl-γ-benzylidene-α-ethylbutyric acid,** β-hydroxy-, methyl ester (KOHLER, HERITAGE, and MACLEOD), 1911, A., i, 863.

**β-Phenyl-γ-benzylidene-ethylmalonic acid** and its methyl ester (REIMER), 1907, A., i, 852.

**β-Phenyl-α-benzylideneglutaconic acid** (FEIST and POMME), 1910, A., i, 39.

**1- and 3-Phenyl-4-benzylidenehydantoin,** and 2-thio- (WHEELER and BRAUTLECHT), 1911, A., i, 500.

**Phenylbenzylidenehydrazine.** See Benzaldehydephenylhydrazone.

**β-Phenyl-γ-benzylidene-α-methylbutyric acid,** β-hydroxy-, ethyl esters (KOHLER, HERITAGE, and MACLEOD), 1911, A., i, 862.

**β-Phenyl-γ-benzylidene-α-methylbutyrophenone** and its dibromide (REIMER and REYNOLDS), 1912, A., i, 769.

**1-Phenyl-4-benzylidene-3-methyl-5-pyrazolone** and its 4-*p*-chloro-*o*-amino-, 4-*p*-chloro-*o*-nitro-, and 4-*o*-*mono*- and *di*-nitro-derivatives (SACHS and SICHEL), 1904, A., i, 594.
  condensation of, with ethyl acetoacetate and with deoxybenzoin (KNOEVENAGEL and HEEREN), 1903, A., i, 661.

**1-Phenyl-4-benzylidene-3-methyl-5-pyrazolone-2′-carboxylic acid** (MICHAELIS, KRUG, LEO, and ZIESEL), 1910, A., i, 514.

**1-Phenyl-4-benzylidene-3-methyl-5-pyrazolone-3′- and -4′-carboxylic acid** (MICHAELIS and HORN), 1910, A., i, 517.

**Phenylbenzylidenemethylthiosemicarbazide** (MICHAELIS and HADANCK), 1908, A., i, 1020.

**Phenylbenzylidenenitromethane** (KNOEVENAGEL and WALTER), 1905, A., i, 66.

**β-Phenyl-β-3-benzylidene*cyclo*pentan-2-onylpropiophenones** (GEORGI and VOLLAND), 1912, A., i, 781.

**1-Phenyl-4-benzylidene-$\Delta^1$-*cyclo*penten-3-one** and its 4-*o*-hydroxy- and -dimethylamino-derivatives (BORSCHE and MENZ), 1908, A., i, 148.

**Phenylbenzylidene-*p*-phenylenediamine,** hydrochlorides of (MOORE and WOODBRIDGE), 1908, A., i, 686.

**3-Phenyl-5-benzylidenerhodanic acid** (ANDREASCH and ZIPSER), 1903, A., i, 856.

**β-Phenyl-γ-benzylidenevaleric acid,** β-hydroxy-, methyl ester (KOHLER and HERITAGE), 1910, A., i, 484.

**Phenyl benzyl ketone.** See Deoxybenzoin.

**Phenylbenzylmalononitrile** (HESSLER), 1904, A., i, 831.

**Phenylbenzylmethylalkylammonium salts**, optically active (Thomas and Jones), 1905, A., i, 263.
**Phenylbenzylmethylallylammonium salts**, *p*-bromo-, optical activity of (Everatt), 1908, T., 1236 ; P., 148.
camphorsulphonates, four isomeric (Harvey), 1905, T., 1481 ; P., 228.
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**Phenylbenzylmethylallylarsonium** iodide and *d*-α-bromocamphor-π-sulphonate (Winmill), 1912, T., 724 ; P., 93.
**Phenylbenzylmethylamine**, *p*-bromo- (Everatt), 1908, T., 1236.
**Phenylbenzylmethylammonium compounds**, influence of constitution on the rotatory power of (Thomas and Jones), 1906, T., 286 ; P., 11.
**Phenylbenzylmethylbutylammonium compounds**, resolution of (Fröhlich and Wedekind), 1907, A., i, 512.
**Phenylbenzylmethyl-*n*-butylammonium salts**, *p*-bromo-, optical activity of (Everatt), 1908, T., 1233 ; P., 148.
**Phenylbenzylmethyl*iso*butylammonium hydroxide**, activation of (Wedekind and Fröhlich), 1906, A., i, 14.
**Phenylbenzylmethylcarbinol**, preparation of (Hell), 1904, A., i, 242 ; (Davies and Kipping), 1911, T., 298.
**2-Phenyl-6-benzyl-5-methyl-1:2-dihydropyridone**, 3-hydroxy- (Bland and Thorpe), 1912, T., 1747.
**Phenylbenzylmethyldihydrotriazole**, *endo*thio- (Busch and Schneider), 1903, A., i, 534.
**Phenylbenzylmethylethylammonium bases** (Wedekind and Fröhlich), 1907, A., i, 122.
**Phenylbenzylmethylethylammonium salts**, *d*- and *l*- (Jones), 1904, T., 223; P., 6.
**2-Phenyl-1-benzyl-6-methyl-1-ethylpiperidinium iodides**, stereoisomeric (Scholtz and Wassermann), 1907, A., i, 341.
**Phenylbenzylmethyl-(methylanilinoethyl)-ammonium salts** (Wedekind and Meyer), 1909, A., i, 186.
**β-Phenyl-α-benzyl-α-methylpropionamide** (Haller and Bauer), 1909, A., i, 655.
**Phenylbenzylmethylpropylammonium bases**, resolution of, into their optical antipodes (Wedekind and Fröhlich), 1905, A., i, 878.
*d*-**Phenylbenzylmethylpropylammonium salts** (Wedekind), 1906, A., i, 161.
iodide, rate of auto-racemisation of (Wedekind), 1906, A., i, 419.
*l*-**Phenylbenzylmethylpropylammonium** chloride (E. and O. Wedekind and Paschke), 1908, A., i, 335.
**Phenylbenzylmethyl-*n*-propylarsonium** iodide (Winmill), 1912, T., 721.
**2-Phenybenzyl-6-methyl-*n*-propylpiperidinium** iodide (Scholtz), 1910, A., i, 634.
**1-Phenyl-4-benzyl-3-methylpyrazole** (Stoermer and Martinsen), 1907, A., i, 447.
**1-Phenyl-4-benzyl-3-methylpyrazole**, 5-amino-, and its derivatives (Michaelis and Preuner), 1905, A., i, 478.
**1-Phenyl-4-benzyl-3-methylpyrazolone** (Michaelis and Preuner), 1905, A., i, 478.
**2-Phenyl-3-benzyl-7-methylquinoline** (Borsche), 1909, A., i, 957.
**2-Phenyl-3-benzyl-7-methylquinoline-4-carboxylic acid** (Borsche), 1909, A., i, 957.
**8-Phenyl-7-benzyl-3-methylxanthine** and **-1:3-dimethylxanthine** and its hydroxy-derivatives (Traube and Nithack), 1906, A., i, 215.
**3-Phenyl-2-benzylnaphthaquinoline-1-carboxylic acid** (Borsche), 1909, A., i, 957.
**Phenylbenzyl-α-naphthylcarbinol** (Bauer), 1909, A., i, 562.
**5-Phenyl-2-benzyloxazole** and its picrate (Robinson), 1909, T., 2170 ; P., 295.
**4-Phenyl-1-benzyl*endo*oxytriazole**, 5-thiol- (Busch and Opfermann), 1904, A., i, 631.
**β-Phenyl-β-benzylpropionic acid** and its silver salt (Ruhemann), 1910, T., 460.
**β-Phenyl-α-benzyl-α-propylpropiophenone** (Haller and Bauer), 1910, A., i, 490.
**1-Phenyl-3-benzyl-5-pyrazolone**, 4-cyano- (Smith and Thorpe), 1907, T., 1909.
**3-Phenyl-1-benzyl-5-pyrazolone**, and 4-oximino- (Curtius and Schneiders), 1912, A., i, 137.
**2-Phenyl-3-benzylquinoline** (Borsche), 1909, A., i, 957.
**2-Phenyl-3-benzylquinoline-4-carboxylic acid** (Borsche), 1909, A., i, 957.
*as*-**Phenylbenzylsemicarbazide** and its diacetyl derivative (Michaelis), 1908, A., i, 471 ; (Milrath), 1908 A., i, 581.

**Phenylbenzylsilicanediol** (Robison and Kipping), 1912, T., 2164 ; P., 245.

**Phenylbenzylsilicol** (Martin), 1912, A., i, 404.

**Phenylbenzylsilicon** chloride (Martin), 1912, A., i, 404.

**α-Phenyl-β-benzylsuccinic acid** and its silver salt (Avery and Upson), 1908, A., i, 343.

**Phenylbenzylsulphone,** *p*-nitro- (Fromm and Wittmann), 1908, A., i, 632.

**Phenylbenzylsulphoxide** (Pummerer), 1910, A., i, 468.

**Phenylbenzyl*di*thiocarbamic acid,** ammonium salt (Heller and Michel), 1903, A., i, 477.

***N*-Phenyl-*S*-benzyl*di*thiourethane** (v. Braun), 1903, A., i, 15.

**Phenylbenzyltriazen** (Dimroth), 1905, A., i, 312.

**Phenylberberine** and its salts (Gadamer and Steinbrecher), 1911, A., i, 153.

***iso*Phenylberberine** and its salts (Gadamer and Steinbrecher), 1911, A., i, 154.

**6-Phenylbindene-8-one** (Kohler), 1907, A., i, 536.

**Phenylbiuret,** *p*-bromo- (Böeseken and Couvert), 1910, A., i, 645.

**Phenylbiurets** and the biuret reaction (Schiff), 1907, A., i, 206 ; (Tschugaeff), 1907, A., i, 595.

**Phenylboric acid** (Khotinsky and Melamed), 1909, A., i, 864.

**Phenylborneol** (Creighton), 1909, A., i, 169.

**β-Phenylborneol** (Haller and Bauer), 1906, A., i, 441.

**Phenylbromoacetic acid,** preparation of (Fischer and Schmidlin), 1905, A., i, 694.
menthyl ester (Cohen), 1911, T., 1065.

**Phenylbromoacetyl-alanine,-asparagine, -aspartic acid,** and **-glycine** (Fischer and Schmidlin), 1905, A., i, 694.

**Phenyl-ω-bromoamylcyanamide** and *p*-bromo- (v. Braun), 1907, A., i, 960.

**β-Phenyl-γ-bromobenzylidenebutyric acid,** β-hydroxy-, methyl ester (Kohler and Heritage), 1910, A., i, 484.

**1-Phenyl-4-α-bromobenzylidenehydantoin,** 2-thio- (Johnson and Brautlecht), 1911, A., i, 813.

**Phenylbromobutyrolactone,** polymerisation of, with elimination of hydrogen bromide (Fittig and Stadlmayr), 1904, A., i, 969.

**Phenyl αβ-*di*bromoethyl ketone,** 4-bromo- (Kohler), 1909, A., i, 939.

*s*-**Phenyl*di*bromo-*o*-hydroxybenzyl-α-*N*-formylhydrazine** and the α-*N*-formyl-*O*-β-*N*-diacetyl, *O*-benzoyl-α-*N*-formyl, and *O*-acetyl-α-*N*-propionyl derivatives and the α-*N*-propionyl-*O*-benzoate (Auwers, Dannehl, and Müller), 1909, A., i, 188.

*s*-**Phenyl*di*bromo-*o*-hydroxybenzylhydrazine** and its acetyl and benzoyl derivatives (Auwers and Dannehl), 1908, A., i, 459.

**Phenyl bromo-*o*-hydroxytolyl** and **bromo-*o*-hydroxy-*p*-xylyl ketones** (Bartolotti and Linari), 1903, A., i, 177.

**Phenyl bromo-4-hydroxy-*o*-xylyl ketone** and its oximes (Bartolotti and Linari), 1903, A., i, 177.

**Phenyl bromo-*p*-methoxystyryl ketone** (Wilson and Boon), 1911, P., 198.

**Phenyl*di*bromomethylsulphone,** *o*-nitro- (Claasz), 1912, A., i, 514.

**Phenyl-*di*- and -*tri*-bromomethylsulphones** (Tröger and Hille), 1905, A., i, 336.

**Phenyl*di*bromomethylsulphoxide,** *o*-nitro- (Claasz), 1912, A., i, 514.

**1-Phenyl-5-bromophenyl-3-methylpyrazoline** (Kohler), 1909, A., i, 940.

**5-Phenyl-1-*p*-bromophenylpyrazoline** (Auwers and Voss), 1910, A., i, 70.

**δ-Phenyl-β-*m*-bromophenylthiosemicarbazide** (Busch and Reinhardt), 1910, A., i, 76.

**Phenyl αβ-*di*bromopropyl ketone,** 4-bromo- (Kohler), 1909, A., i, 940.

**Phenyl-*p*-bromoquinoxanthenol** bromide hydrobromide (Gomberg and Cone), 1910, A., i, 58.

**Phenyl-*p*-bromoxanthenol** and its bromide (Gomberg and Cone), 1910, A., i, 58.

**α-Phenyl-$\Delta^{\alpha\gamma}$-butadiene** (Klages), 1904, A., i, 568 ; (v. der Heide), 1904, A., i, 583.
and its tetrabromide (Doebner and Schmidt), 1907, A., i, 204.
optical behaviour of (Klages), 1907, A., i, 500.
addition of hydrogen bromide to (Riiber), 1911, A., i, 979.
di- and tetra-bromides (Riiber), 1903, A., i, 471.

**2-Phenylbutadienyl-4-dihydroquinazolone** (Bogert and Beal), 1912, A., , 395.

**2-Phenylbutadienyl-4-dihydroquinazolone** methiodide (Bogert and Geiger), 1912, A., i, 511.
**Phenylbutadienyltrimethyl*cyclo*pentane** (Rupe and Frisell), 1905, A., i, 221.
**α-Phenylbutaldehyde** and its oxime and semicarbazone (Stoermer, Schenck zu Schweinsberg, Sibbern-Sibbers, and Riebel), 1906, A., i, 583.
**γ-Phenylbutaldehyde** and its derivatives (v. Braun and Kruber), 1912, A., i, 266.
**Phenylbutanes.** See Butylbenzenes.
**α-Phenylbutan-γ-ol** and its salts (Vavon), 1912, A., i, 629.
**β-Phenylbutan-β-ol-γ-one** (*phenyldimethylketol*) and its phenylmethylhydrazone (Diels and Johlin), 1911, A., i, 254.
**α-Phenylbutan-β-one** semicarbazone (Senderens), 1910, A., i, 489.
**α-Phenylbutan-γ-one** and its oxime (Vavon), 1912, A., i, 629.
  and its oxime and semicarbazone (Senderens), 1911, A., i, 302.
**α-Phenylbutan-γ-one,** *p*-amino-, and its semicarbazone, and *p*-nitro-, semicarbazone of (Mech), 1908, A., i, 655.
  *o*-nitro-, oxime and semicarbazone of (Mech), 1908, A., i, 655.
  *p*-nitro-, and its oxime (Mech), 1907, A., i, 63.
**Phenyl-$\Delta^2$-butene** (Straus and Müller), 1906, A., i, 79.
**Phenyl*cyclo*butene** (Doebner and Schmidt), 1907, A., i, 204.
**β-Phenyl-$\Delta^{\beta}$-butenoic acid,** γ-cyano- (Guareschi), 1907, A., i, 1004.
**α-Phenyl-$\Delta^{\alpha}$-buten-γ-ol** and **α-Phenyl-α-butinen-γ-ol** and their reduction (Klages, Gieser, and Lauck), 1906, A., i, 661.
**Phenylbutenylacetylene** (Brachin), 1907, A., i, 129.
**Phenylbutenylcarbinol** (v. Braun and Deutsch), 1912, A., i, 106.
**Phenyl *iso*butenyl ketone** and its phenylhydrazone (Kohler), 1909, A., i, 940.
  and its *p*-nitrophenylhydrazone (Blaise and Herman), 1911, A., i, 881.
**Phenyl-butenyl(or butadienyl)-trimethyl*cyclo*pentenecarboxylic acid** (Rupe and Frisell), 1905, A., i, 221.
**Phenylbutinene** (André), 1911, A., i, 277.
**δ-Phenylbutyl alcohol** and its phenylurethane (v. Braun, Deutsch, and Kruber), 1911, A., i, 968.
**γ-Phenyl*iso*butyl alcohol** and its acetate and phenylcarbamate (Guerbet), 1908, A., i, 163, 635.
**δ-Phenylbutyl** chloride, *p*-nitro- (v. Braun and Deutsch), 1912, A., i, 846.
  nitrite (v. Braun and Kruber), 1912, A., i, 266.
**Phenylbutylamine,** *tri*nitro- (Franchimont), 1910, A., i, 616.
**δ-Phenylbutylamine** and its derivatives (v. Braun), 1910, A., i, 844.
**β-Phenylbutyl anisyl ketone** and its oxime (Kohler), 1907, A., i, 1053.
**1-Phenyl-2-*iso*butylbenziminazole,** 4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 2043.
**β-Phenyl-α-*tert.*-butyl-β-benzoylpropionic acid** and the action of phenylhydrazine on (Japp and Maitland), 1904, T., 1500.
**Phenyl*iso*butylcarbinol** (Schorigin), 1907, A., i, 754.
  and its dibromide (Klages), 1904, A., i, 569.
**Phenyl*tert.*-butylcarbinol** (Lepin), 1912, A., i, 957.
**δ-Phenylbutyldimethylamine,** *p*-amino-, *p*-hydroxy-, and their salts (v. Braun and Deutsch), 1912, A., i, 846.
**α-Phenyl-$\Delta^{\alpha}$-butylene** and its dibromide and α-chloro-β-bromo- (Kunckell and Siecke), 1903, A., i, 331.
**α-Phenyl-$\Delta^{\alpha}$-butylene,** γ-amino-, and its acyl derivatives (Harries and de Osa), 1903, A., i, 815.
**α-Phenyl-$\Delta^{\beta}$-butylene** (Fichter and Alber), 1907, A., i, 86.
  and its ozonide (Harries and de Osa), 1904, A., i, 386.
**α-Phenyl-$\Delta^{\gamma}$-butylene** ($\Delta^3$-*butenylbenzene*) (Riiber), 1911, A., i, 848.
**β-Phenyl-$\Delta^{\beta}$-butylene** (Klages and Hahn), 1903, A., i, 19.
**Phenylbutylenes,** isomeric (Harries and de Osa), 1903, A., i, 815.
**α-Phenyl-$\Delta^{\alpha}$- and -$\Delta^{\beta}$-butylenes** (Klages), 1904, A., i, 568.
**β-Phenylbutylene αβ-glycol** and its anhydride (Stoermer, Schenck zu Schweinsberg, Sibbern-Sibbers, and Riebel), 1906, A., i, 582.
**Phenylbutylene oxide** (Tiffeneau), 1906, A., i, 966.
***N*-Phenylbutylene-ψ-thiocarbamide.** See 2-Phenylimino-5-ethyltetrahydrothiazole.
**Phenylbutyl *cyclo*hexyl ketone** (Kohler and Burnley), 1910, A., i, 392.

**β-Phenyl-β-*n*-butylhydracrylic acid** (Schroeter and Buchholz), 1908, A., i, 170.

**β-Phenyl-β-*iso*butylhydracrylic acid** (Schroeter), 1907, A., i, 531.

**Phenyl butyl ketone** and its oxime and semicarbazone (Layraud), 1906, A., i, 432.

**Phenyl *iso*butyl ketone,** α-bromo- (Kunckell and Stahel), 1904, A., i, 386.

*p*-bromo-, and its oxime (Kohler), 1909, A., i, 394.

**ε-Phenylbutylmalonic acid** and its ethyl ester and α-bromo- (v. Braun and Kruber), 1912, A., i, 265.

**α-Phenyl-*sec.*-butylmalonic acid** (Inglis), 1911, T., 542.

**1-Phenyl-2-*iso*butyl-3-methylbenziminazolium,** 4:7-*di*nitro-6-hydroxy-, iodide and chloride (Meldola and Kuntzen), 1911, T., 2043.

**Phenylbutyl methyl ether** (v. Braun and Deutsch), 1912, A., i, 687.

**δ-Phenylbutyl methyl ketone** and its oxime (Borsche), 1911, A., i, 880.

**Phenylbutyl-1:3-β-naphth*iso*oxazines,** 2:4- and 4:2- (Betti), 1903, A., i, 510.

**Phenylbutylnitroamine,** *tri*nitro- (Franchimont), 1910, A., i, 616.

**Phenylbutylpiperidylthiocarbamide** (v. Braun and Deutsch), 1912, A., i, 694.

**1-Phenyl-4-butyl-5-pyrazolidone** (Blaise and Luttringer), 1905, A., i, 628.

**1-Phenyl-3-*tert.*-butyl-5-pyrazolone** (Wahlberg), 1911, A., i, 708.

**5-Phenyl-1-*tert.*-butyl-1:2:3:4-tetrazole** (Schroeter), 1911, A., i, 505.

**Phenylbutylthiocarbimide** (v. Braun and Deutsch), 1912, A., i, 694.

**1-Phenyl-2-** and **-4-*n*-,** and **-*iso*-butylurazole,** and their silver salts (Brunel and Acree), 1910, A., i, 521.

**α-Phenylbutyric acid,** derivatives of (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 974.

menthyl ester (Rupe and Busolt), 1909, A., i, 928.

**α-Phenylbutyric acid,** α-amino-, and its nitrile, hydrochloride of (Jaweloff), 1906, A., i, 427.

α-hydroxy-, preparation and resolution of (Smith), 1912, A., i, 114.

**β-Phenylbutyric acid** and its derivatives (Schroeter), 1907, A., i, 531.

and its amide and α-cyano-derivative (Kohler and Reimer), 1905, A., i, 348; (Kohler), 1905, A., i, 701.

synthesis of, and its amide and anilide (Eykman), 1908, A., i, 795.

**β-Phenylbutyric acid,** β-amino- (Posner and Stirnus), 1912, A., i, 456.

β-bromo-α-hydroxy-, ethyl ester (Claisen), 1905, A., i, 287.

β-hydroxy-, and its salts (Michnovitsch), 1904, A., i, 417.

**γ-Phenylbutyric acid** (Semmler), 1906, A., i, 298.

preparation of (Rupe and Proske), 1910, A., i, 367.

ethyl ester (v. Braun, Deutsch, and Kruber), 1911, A., i, 968.

**γ-Phenylbutyric acid,** α-amino- and α-bromo- (Fischer and Schmitz), 1906, A., i, 183; (Knoop and Hoessli), 1906, A., i, 431.

γ-amino- and its hydrochloride and lactam (Köhl), 1903, A. i, 234.

*o*-amino-, and its ethyl ester and lactam and *N*-benzoyl derivative and its additive salts and nitrile (v. Braun), 1907, A., i, 524.

α-cyano-γ-hydroxy-, and its lactone (Bougault), 1908, A., i, 422.

lactone of (Haworth), 1909, T., 483.

β-imino-α-cyano-, and its methyl ester and silver salt (Best and Thorpe), 1908, P., 283; 1909, T., 10.

ethyl ester (Atkinson and Thorpe), 1905, P., 305.

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γ-imino-α-cyano-, ethyl ester, formation and condensation of (Thorpe), 1907, T., 1007; P., 151.

β-iodo-γ-hydroxy-, and β-iodo-αγ-*di*hydroxy-, lactones of (Bougault), 1908, A., i, 538.

***l*-β-Phenylbutyric acid** and its menthyl ester and chloride (Rupe and Busolt), 1909, A., i, 927.

**β-Phenyl*iso*butyric acid** (*β-phenyl-α-methylpropionic acid*), resolution of (Kipping and Hunter), 1903, T., 1005.

resolution of, and *d*-, *l*-menthylamine salt, and chloride (Pickard and Yates), 1909, T., 1019; P., 152.

menthyl ester (Rupe and Busolt), 1909, A., i, 927.

**β-Phenyl*iso*butyric acid,** β-amino-, and its hydrochloride and benzoyl derivative (Posner and Stirnus), 1912, A., i, 456.

**Phenylbutyric acids** and their α-amino-derivatives (Fischer and Schmitz), 1906, A., i, 584.

**Phenylbutyric acids**, α-, β-, and γ-, synthesis of (Eykman), 1908, A., i, 23.

hydroxylamino- (Posner), 1904, A., i, 161.

**Phenylbutyric-*o*-carboxylic acid.** See *o*-Carboxy-γ-phenylbutyric acid.

**Phenylbutyrimido-ether**, hydrochloride and diphenylamidine derivative (v. Braun and Kruber), 1912, A., i, 265.

**Phenylbutyrolactone**, α-hydroxy-, and its conversion into β-benzoylpropionic acid (Erlenmeyer), 1903, A., i, 32.

γ-**Phenylbutyronitrile** (v. Braun), 1910, A., i, 844.

β-**Phenylbutyrophenone**, *ααα-tri*chloro- (Kohler), 1907, A., i, 1053.

β-**Phenyl*iso*butyrophenone**, two oximes, and phenylhydrazone of (Kohler), 1909, A., i, 940.

β-**Phenyl*iso*butyryl chloride** (*benzylmethylacetyl chloride*), interaction of, with bases (Kipping and Salway), 1904, T., 443; P., 40.

**Phenylcamphanylthiocarbamide** (v. Pawlewski), 1904, A., i, 237.

β-**Phenylcamphene** (Haller and Bauer), 1906, A., i, 441.

**Phenylcamphoformeneamine**, phenylsulphone of (Tingle and Hoffmann), 1905, A., i, 800.

**Phenylcamphoformeneamine**, *p*-chloro- (Tingle and Bates), 1911, A., i, 55.

**Phenylcamphoformeneaminecarboxylic acid**, methyl ester and dibenzylamine salt, and *p*-chloro- (Tingle and Bates), 1911, A., i, 54.

**Phenylcamphoramic acid**, *p*-hydroxy-, isomeric forms of (Piutti, Leone, and D'Emilio), 1910, A., i, 675.

**Phenyl-α-camphoramic acid**, 3-amino-, and its hydrochloride and acetyl derivative, 4-hydroxy-, and 3-nitro- (Wootton), 1910, T., 413.

4-amino-, 4-bromo-, 4-bromo-3-amino-, and its acetyl derivative, and 4-bromo-3-nitro- (Wootton), 1907, T., 1895; P., 250.

*N*-**Phenylcamphorimide**, 4-bromo-, 4-bromo-3-amino-, and 4-bromo-3-nitro- (Wootton), 1907, T., 1898; P., 250.

*p*-hydroxy- (Piutti, Leone, and D'Emilio), 1910, A., i, 675.

**Phenylcamphylpyrazole**, *p*-bromo-, and its **carboxylic acid** and its ethyl ester (Tingle and Robinson), 1906, A., i, 904.

**Phenylcamphylpyrazolecarboxylic acid** (Tingle and Robinson), 1906, A., i, 903.

**Phenyl-2-camphylsulphone**, 1:4-*di*hydroxy- (Borsche and Lange), 1906, A., i, 679.

**Phenylcarbamic acid** derivatives, crystallography of (Jaeger), 1906, A., i, 15, 500.

*p*-hydroxyphenylhydrazide of (Borsche and Zeller), 1904, A., i, 1056.

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calcium salt (Erdmann and van der Smissen), 1908, A., ii, 588.

tetramethylammonium salt (Losanitsch), 1907, A., i, 694.

*o*-chlorophenyl ester (Michael and Cobb), 1908, A., i, 949.

chloro- and bromo-substituted propyl and isopropyl esters of (Johnson and Langley), 1910, A., i, 885.

5-hydroxy-*m*-xylyl ester of (Carlinfanti), 1910, A., i, 733.

phenyl ester (Scholl and Nyberg), 1906, A., i, 656.

**Phenylcarbamic acid**, 3:5-*di*nitro-, ethyl ester (Curtius and Riedel), 1907, A., i, 970.

**Phenylcarbamic azoimide**, action of, on glycine (Curtius and Lenhard), 1904, A., i, 888.

**Phenylcarbamic hydrazide** and its hydrochloride and acetophenone compound (Borsche), 1905, A., i, 305.

**Phenylcarbamide**, action of, on acetic acid and its chloro-derivatives (Vallée), 1905, A., i, 771.

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chloro-derivatives (Doht), 1906, A., i, 419.

**Phenylcarbamide**, amino- (*α-phenylsemicarbazide*) (Pellizzari), 1907, A., i, 874.

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*p*-bromo-, *N*-benzoyl derivative, a by-product in the preparation of benzoylbromoamide (Moore and Cederholm), 1906, A., i, 831.

*m*-cyano- (Bogert and Beans), 1904, A., i, 584.

*p*-cyano- (Bogert and Wise), 1912, A., i, 451.

*m*- and *p*-cyanoamino- (Pierron), 1908, A., i, 925.

*o*-, *m*-, and *p*-iodo-, and their acetyl derivatives (Doht), 1905, A., i, 49.

**Phenylcarbamide,** *p*-nitro- (Pierron), 1905, A., i, 126.
**Phenyl*iso*carbamide methyl and ethyl ethers,** silver salts of (Bruce), 1904, A., i, 492.
**Phenylcarbamido-*p*-aminobenzeneazoformamide** (Borsche and Reclaire), 1907, A., i, 988.
**Phenylcarbamidoazobenzene** and its salts (Dimroth), 1907, A., i, 654.
**Phenylcarbamidobenzanilides** (Busch, Blume, Pungs, and Fleischmann), 1909, A., i, 567.
*o*-**Phenylcarbamidobenzoic acid** (Riedel), 1912, A., i, 774.
**5-Phenylcarbamidodihydro-4-quinazolone** (Bogert and Chambers), 1906, A., i, 389.
**Phenylcarbamidodiphenylmethenylamidine** and *p*-chloro- (v. Walther), 1906, A., i, 212.
*β*-**Phenylcarbamidoethanesulphonic acid** (Paal and Zitelmann), 1904, A., i, 100.
**Phenylcarbamidogalactamine** pentaphenylcarbamate (Roux), 1903, A., i, 73.
*α*-**Phenylcarbamido-*β*-*p*-hydroxyphenylpropionic acid** and its salts (Paal and Zitelmann), 1904, A., i, 100.
**Phenylcarbamidoleucylglycylglycine** (Fischer), 1903, A., i, 800.
**3-Phenylcarbamido-2-methyl-3:4-dihydro-4-quinazolone** (Bogert and Gortner), 1909, A., i, 679.
**4-Phenyl-2-carbamidomethylthiazole** and its hydrobromide (Johnson and Burnham), 1912, A., i, 306.
**6-Phenylcarbamido-1-naphthol-3-sulphonic acid,** *p*-amino-, *N*-acetyl derivative (Gesellschaft für Chemische Industrie in Basel), 1904, A., i, 492.
**3-Phenylcarbamido-*o*-phthalimide** (Bogert and Jouard), 1909, A., i, 306.
**Phenylcarbamidosuccinic acid** (Paal and Zitelmann), 1904, A., i, 100.
*s*-**1-Phenylcarbamido-1:3:4-triazole** (Bülow), 1909, A., i, 681.
**Phenylcarbamotropeine,** salts of (Jowett and Pyman), 1909, T., 1027.
**Phenylcarbamyl-benz- and -salicylhydroxamic acids** (Marquis), 1907, A., i, 123.
**Phenylcarbamyldiphenylguanidine** (Busch and Blume), 1907, A., i, 261.
**Phenylcarbamylfurylpyrazolone** (Torrey and Zanetti), 1910, A., i, 892.
**Phenylcarbamylmethylpyridinium** salts (Scheda), 1903, A., i, 410; (Schmidt), 1903, A., i, 427.
**Phenylcarbamylmethyl-quinolinium** and -*iso***quinolinium** salts (Scheda), 1903, A., i, 410.
**Phenylcarbamyltetramethylammonium** salts (Scheda), 1903, A., i, 410; (Schmidt), 1903, A., i, 427.
**9-Phenylcarbazole** (Cassella & Co.), 1910, A., i, 775.
**4-Phenyl-2-carbethoxyaminomethylthiazole** and its hydrobromide (Johnson and Burnham), 1912, A., i, 305.
**Phenylcarbimide** (*carbanil; phenyl isocyanate*) action of, on monohydric alcohols (Bloch), 1904, A., i, 152, 236.
  action of, on amino-acids (Paal and Zitelmann), 1904, A., i, 100.
  behaviour of carboxylic acids towards (Dieckmann and Breest), 1906, A., i, 832.
  interaction of, with 1:3-dicarbonyl compounds (Dieckmann, Hoppe, and Stein), 1905, A., i, 135.
  behaviour of hydrogen cyanide towards (Dieckmann and Kämmerer), 1905, A., i, 874; 1907, A., i, 979.
  action of, on methylnitroamine (Scholl and Holdermann), 1906, A., i, 767.
  action of, on certain phenylamic acids (Abati and Gallo), 1906, A., i, 944.
  action of, on sodium nitromethane and nitroethane (Steinkopf and Daege), 1911, A., i, 280.
  action of, on sulphonic acids (Vallée), 1905, A., i, 771.
  formation of carbodiphenylimide from (Stollé), 1908, A., i, 415.
  as reagent for determining the constitution of merotropic compounds (Michael and Cobb), 1908, A., i, 947.
  as a reagent for determining the constitution of tautomeric compounds (Michael), 1905, A., i, 195; (Goldschmidt), 1905, A., i, 340.
  reactions of (Vallée), 1908, A., i, 976.
**Phenylcarbithionic acid** and its salts and *p*-bromo-derivative (Houben and Pohl), 1906, A., i, 847.
  salts and esters of (Höhn and Bloch), 1911, A., i, 48.
  bismuth and iron salts and methyl and ethyl esters (Bloch and Höhn), 1910, A., i, 256.

**Phenylcarbithionic acid**, *o*-hydroxy-. See Salicylic acid, *di*thio-.

**3-Phenylcarbostyril** (HÜBNER), 1908, A., i, 288.

**3-Phenylcarbostyril**, *p*-bromo- (PSCHORR and SCHÜTZ), 1906, A., i, 850.
  *o*-*p*-*di*nitro- (BORSCHE), 1909, A., i, 386.

**3-Phenyl*iso*carbostyril**, 2-amino-, and its benzylidene derivative (WÖLBLING), 1906, A., i, 49.

**2-Phenyl*iso*carbostyril-4-carboxylic acid** and its ethyl ester (DIECKMANN and MEISER), 1908, A., i, 895.

**1-Phenyl-4-*o*-carboxybenzyl-3:5-dimethylpyrazole** (BÜLOW and DESENISS), 1907, A., i, 253.

**3-Phenyl-2-*o*-carboxyphenylquinoline-4-carboxylic acid** (FARBENFABRIKEN VORM. F. BAYER & Co.), 1912, A., i, 1019.

**Phenylcarbylamine** from nitrobenzene and from pyrogallol (BRUNNER and VUILLEUMIER), 1908, A., i, 878.
  platinum compounds of (HOFMANN and BUGGE), 1907, A., i, 489; (RAMBERG), 1907, A., i, 604.
  a reaction of (CHWALA), 1907, A., ii, 825.

**2-Phenylcarveol.** See 2-Phenyl-$\Delta^{6:8(9)}$-menthadien-2-ol.

**ω-Phenyl-*p*-chloroacetanilide** (v. WALTHER and GROSSMANN), 1909, A., i, 56.

**Phenylchloroacetic acid**, menthyl ester (COHEN), 1911, T., 1065.

***d*-Phenylchloroacetic acid**, preparation of, and conversion into mixtures of *r*- and *l*-mandelic acids, and *r*- and *l*-phenylaminoacetic acids (MCKENZIE and CLOUGH), 1909, T., 782.

***l*-Phenylchloroacetic acid**, displacement of halogen in, by hydroxy- and methoxy-groups (MCKENZIE and CLOUGH), 1908, T., 811; P., 91.
  conversion of, into mixtures of *r*- and *d*-, and *r*- and *l*-mandelic acids, and *r*- and *d*-phenylaminoacetic acids (MCKENZIE and CLOUGH), 1909, T., 788; P., 70.
  methyl and ethyl esters (MCKENZIE and BARROW), 1911, T., 1917.

***r*-Phenylchloroacetic acid**, resolution of (MCKENZIE and CLOUGH), 1908, T., 818; P., 91.

**Phenylchloroacetyltropeine** and its salts and methobromide (JOWETT and PYMAN), 1909, T., 1024.

**1-Phenyl-4-α-chlorobenzylidenehydantoin**, 2-thio- (JOHNSON and BRAUTLECHT), 1911, A., i, 813.

**Phenylchlorocarbamide**, *p*-chloro-, 2:4-*di*chloro-, and 2:4:6-*tri*chloro- (CHATTAWAY and CHANEY), 1910, T., 294.

**Phenyl*di*chlorocarbamide**, *p*-chloro-, 2:4-*di*chloro-, and 2:4:6-*tri*chloro- (CHATTAWAY and CHANEY), 1910, T., 295.

**Phenyl-*s*-*di*chlorocarbamide**, 2:4-*di*chloro- (CHATTAWAY and CHANEY), 1910, T., 297.

**Phenyl*tri*chlorocarbamide**, *p*-chloro-, and 2:4:6-*tri*chloro- (CHATTAWAY and CHANEY), 1910, T., 295.

**Phenyl-1:3-*di*chloro-4-iodophenyliodonium**, 1:3-*di*chloro-, chloride and other salts (WILLGERODT and BÖLLERT), 1910, A., i, 828.

**Phenylchlorolactic acid** and its derivatives (FOURNEAU), 1907, A., i, 622.

**Phenyl*tri*chloromethylcarbinol** and its benzoate (DINESMANN), 1905, A., i, 645.

**Phenylchloromethylenecamphor** and the action of aniline and alcoholic ammonia on (FORSTER), 1903, T., 104.

**3-Phenyl-1-*o*-chloro-*p*-nitrophenyl-5-methyl-1:2:4-triazole** (PONZIO), 1910, A., i, 444.

**Phenyl-*p*-chlorophenylethenylamidine** and its additive salts (v. WALTHER and GROSSMANN), 1909, A., i, 55.

**Phenyl-*m*- and -*p*-chlorophenylethenylamidines** and their additive salts (v. WALTHER and GROSSMANN), 1909, A., i, 56.

**Phenyl-1:3-*di*chlorophenyliodonium** iodide and other salts (WILLGERODT and BÖLLERT), 1910, A., i, 828.

**Phenyl-*s*-*tri*chlorophenyliodonium** chloride and iodide (WILLGERODT and WILCKE), 1910, A., i, 828.

**5-Phenyl-2-*o*-chlorophenyloxazole** (LISTER and ROBINSON), 1912, T., 1302.

**1-Phenyl-4-*p*-chlorophenyl-3-phenoxymethylpyrazolone**, 5-imino-, and its derivatives (v. WALTHER and HERSCHEL), 1911, A., i, 238.

**δ-Phenyl-β-*m*-chlorophenylthiosemicarbazide** (BUSCH and REINHARDT), 1910, A., i, 76.

**Phenylchloro*iso*propyl alcohol** and its acyl derivatives (FOURNEAU and TIFFENEAU), 1908, A., i, 163.

**Phenyl-*p*-chloroquinoxanthenol** chloride hydrochloride (GOMBERG and CONE), 1910, A., i, 58.

**Phenyl-*p*-chlorostyrylchlorobromomethane**, *p*-chloro- (STRAUS, ACKERMANN, and LUTZ), 1910, A., i, 120.

**Phenyl-*p*-chlorostyryl*di*chloromethane**, *p*-chloro- (STRAUS and ACKERMANN), 1909, A., i, 490.

**Phenyl *p*-chlorostyryl ketone,** *p*-chloro- (pp-*dichlorobenzylideneacetophenone*), and its derivatives (Straus and Ackermann), 1909, A., i, 489.

**Phenyl-6-chloro-1-tolyl-3-thiocarbamide** (Bamberger and de Werra), 1903, A., i, 22; (Bamberger, Ter-Sarkissjanz, and de Werra), 1903, A., i, 25.

**Phenyl*di*chlorovinyliodonium bromide** (Thiele and Haakh), 1909, A., i, 866.

**Phenyl-*p*-chloroxanthenol** and its chloride (Gomberg and Cone), 1910, A., i, 57.

**Phenylchrysofluorene** and its alcohol (Ullmann and Mourawiew-Winigradoff), 1905, A., i, 642.

**2-Phenylcinchonic acid** (*atophan*), influence of, on purine metabolism (Starkenstein), 1911, A., ii, 753; (Fromherz), 1911, A., ii, 1016.
  influence of, on uric acid formation (Frank and Przedborski), 1912, A., ii, 659.
  behaviour of, in the organism (Dohrn), 1912, A., ii, 965.
  methyl ester and amide (Meyer), 1907, A., i, 342.

**2-Phenylcinchonic acid,** 6- and 7-chloro- and 7-hydroxy- (Borsche), 1909, A., i, 53.

**3-Phenylcinchonic acid** and its derivatives (Hübner), 1908, A., i, 288.
  and its salts, esters, amide, anilide, and hydrazide (Hübner), 1906, A., i, 383.

**Phenylcinchotoxile,** chloro-, and its picrate and platinichloride (Comanducci), 1910, A., i, 583.

**Phenylcinchotoxol** (Comanducci and Melone), 1909, A., i, 409.
  salts and derivatives of (Comanducci), 1910, A., i 582.

**Phenylcinnamaldoxime** (Plancher and Piccinini), 1905, A., i, 706.

**α-Phenylcinnamenylacrylic acid** and its methyl ester (Michael and Leighton), 1904, A., i, 243.
  action of bromine on (Hinrichsen and Triepel), 1904, A., i, 1013.
  *di*bromide, constitution of (Michael and Leighton), 1904, A., i, 242; (Hinrichsen), 1904, A., i, 415.
  amyl ester (Rupe and Dorschky), 1909, A., i, 929.

**α-Phenylcinnamenylacrylic acid,** *p*-nitro-, and its salts, bromo-lactone, dibromide, methyl ester and nitrile (Hinrichsen and Reimer), 1904, A., i, 414, 1013.

**α-Phenylcinnamenylacrylic acid,** *p*-nitro-, methyl ester, oxidation of (Hinrichsen and Reimer), 1905, A., i, 132.

**α-Phenylcinnamic acid,** esters, action of magnesium organic compounds on (Kohler and Heritage), 1905, A., i, 208.
  phenyl ester (Kohler and Heritage), 1906, A., i, 96.

**α-Phenylcinnamic acid,** 2-amino-3-hydroxy- (Pschorr and Quade), 1906, A., i, 851.
  2-amino-5-hydroxy-, and 2-nitro-5-hydroxy- (Pschorr and Quade), 1906, A., i, 851.
  *o*-bromo-*o*-amino-, and *o*-bromo-*o*-nitro- (Pschorr and Treidel), 1912, A., i, 766.
  *p*-bromo-2-amino-, and *p*-bromo-2-nitro- (Pschorr and Schütz), 1906, A., i, 850.
  *p*-hydroxy-, and its methyl ester, and their acetyl derivatives (Zincke and Geibel), 1906, A., i, 739.
  *o*:2-*di*nitro- (Pschorr and Popovici), 1906, A., i, 851.

**β-Phenylcinnamic acid** (Kohler and Heritage), 1905, A., i, 208; (Kohler and Johnstin), 1905, A., i, 215.
  and its salts (Rupe and Busolt), 1908, A., i, 23.
  and its nitrile and α-cyano-derivative (Kohler and Reimer), 1905, A., i, 347.
  methyl ester (Posner), 1911, A., i, 53.

**Phenylcinnamic acids,** photochemical reactions of (Bakunin), 1912, A., i, 356.

α- and **β-Phenylcinnamic acids,** menthyl esters (Rupe and Busolt), 1909, A., i, 928.

**α-Phenylcinnamic anhydride,** *o*:2-*di*amino-. See 3-Benzylideneoxindole, *o*-amino-.

**α-Phenylcinnamonitrile** (*benzylidenebenzyl cyanide*), action of hydrogen cyanide on (Knoevenagel and Schlüchterer), 1904, A., i, 1028.
  condensation of, with hydrogen cyanide (Lapworth), 1903, T., 998; P., 189.

**Phenylcinnamoylmesitylene** (Kohler), 1907, A., i, 1054.

**Phenylcinnamyldimethylammonium salts** (Emde), 1909, A., i, 565; (Emde and Franke), 1909, A., i, 709.

**Phenylcinnamylene-*p*-phenylenediamine** and its hydrochlorides (Moore and Woodbridge), 1908, A., i, 686.

α-**Phenylcinnamylideneacetic acid**, methyl ester, reaction of, with organic magnesium compounds (Reimer and Reynolds), 1908, A., i, 988.

β-**Phenylcinnamylideneacetic acid** (Kohler, Heritage, and Macleod), 1911, A., i, 863.

β-**Phenyl-**γ-**cinnamylidenebutyric acid**, β-hydroxy-, methyl ester (Kohler and Heritage), 1910, A., i, 485.

**1-Phenyl-4-cinnamylidenehydantoin**, 2-thio- (Wheeler and Brautlecht), 1911, A., i, 501.

**Phenyl cinnamylidenemethyl ketone** (*cinnamylideneacetophenone*), action of light on (Stobbe and Rücker), 1911, A., i, 385.
  action of hydroxylamine on (Ciusa and Terni), 1908, A., i, 763.
  action of organic magnesium compounds on (Kohler), 1905, A., i, 358.
  union of, with mercaptans (Ruhemann), 1905, T., 23.
  acetal of (Straus), 1912, A., i, 991.
  dipicrate (Vorländer and Siebert), 1905, A., i, 793.
  hydroxylamineoximes and oximes and their benzoyl derivatives, α- and β- (Ciusa), 1907, A., i, 62; (Ciusa and Terni), 1908, A., i, 763.
  nitrate (Reddelien), 1912, A., i, 986.

**2-Phenyl-4-cinnamylideneoxazolone** (Erlenmeyer and Matter), 1905, A., i, 238.

**3-Phenyl-5-cinnamylidenerhodanic acid** (Andreasch and Zipser), 1903, A., i, 856.

**4-Phenylcinnoline** and its salts, methochloride, and methiodide (Stoermer and Fincke), 1909, A., i, 842.

**4-Phenylcinnoline**, *p*-hydroxy-, and its salts (Stoermer and Gaus), 1912, A., i, 1026.

**4-Phenylcinnolinic acid.** See 4-Phenylpyridazine-5:6-dicarboxylic acid.

**Phenylcitraconamic acid**, *p*-hydroxy- (Piutti, Pagniello, and Marciano), 1910, A., i, 672.

**Phenylcitraconimide**, *p*-hydroxy- (Piutti, Pagniello, and Marciano), 1910, A., i, 672.

*N*-**Phenyl-**β-*cyclo***citraloxime** (Alessandri), 1910, A., i, 753.

**1-Phenylcitronellol** (Austerweil and Cochin), 1910, A., i, 572.

**10-Phenylcœroxene** (Decker and Sassu), 1906, A., i, 689.

α-**Phenylcoumaran**, *p*-hydroxy-, and its acetyl derivative and methyl ether (Werner, Schorndorff, and Chorower), 1906, A., i, 181.

**Phenylcoumarans**, 1- and 2- (Stoermer and Reuter), 1904, A., i, 181.

**3-Phenylcoumarin** (Borsche and Streitberger), 1904, A., i, 893.

**3-Phenylcoumarin**, *o*-nitro- (Borsche), 1909, A., i, 925.
  *o-p-di*nitro- (Borsche), 1909, A., i, 386.
  2:6-*di*nitro- (Borsche and Rantscheff), 1911, A., i, 332.

**4-Phenylcoumarin** (Stoermer and Friderici), 1908, A., i, 180.

**4-Phenylcoumarin**, 4:4′-*di*hydroxy- (Bargellini and Leonardi), 1911, A., i, 902.

**3-Phenyl*iso*coumarin**, action of hydrazine on (Wölbling), 1906, A., i, 49.

**4-Phenylcoumarins** (Bargellini and Leonardi), 1911, A., i, 901; (Bargellini and Forli-Forti), 1911, A., i, 902.

**1-Phenylcoumarone**, bromo- (Stoermer and Decker), 1911, A., i, 665.

**2-Phenylcoumarone** (Stoermer and Kippe), 1904, A., i, 183.

**2-Phenylcoumarone**, 1-bromo-, and 1-nitro- (Stoermer and Decker), 1911, A., i, 665.
  2-*p*-bromo-, 2-*p*-chloro-, 1-chloro-2-*p*-bromo-, and 1-chloro-2-*p*-chloro- (Stoermer and Hildebrandt), 1911, A., i, 666.

**Phenylcoumarones** and their bromo- and chloro-derivatives (Stoermer and Reuter), 1904, A., i, 181.

**Phenyl*iso*crotonamide** (Köhl), 1903, A., i, 234.

α-**Phenylcrotonic acid** (*methylatropic acid*), ethyl ester (Dimroth and Feuchter), 1903, A., i, 631.
  menthyl ester (Rupe and Busolt), 1909, A., i, 928.

**Phenyl*iso*crotonic acid**, polymerisation of (Fittig and Hadorff), 1904, A., i, 968.
  esterification constant of (Sudborough and Thomas), 1907, T., 1034; P., 146.
  its anilide and *p*-toluidide, and anhydride (Fichter and Pfister), 1904, A., i, 548.
  hydroxylamine salt (Posner and Stirnus), 1912, A., i, 457.
  esters (Vorländer and Strunck), 1906, A., i, 366.
  ethyl ester (Sudborough and Thomas) 1911, T., 2314.

**Phenyl*iso*crotonic acid**, methyl ester, ψ-nitrosite and nitro-oxime of (Wieland), 1904, A., i, 55.
volumetric estimation of (Bougault), 1908, A., i, 983.
**α-Phenyl*iso*crotonic acid**, hydroxy- (Erlenmeyer), 1905, A., i, 785.
**Phenylcrotonic acids**, αβ- and βγ- (Vorländer and Strunck), 1906, A., i, 367.
**Phenyl*iso*crotophenone** and its oxime and *O*-benzoyl derivative (Wieland and Stenzl), 1908, A., i, 35.
**Phenylcuminaldoxime** (Plancher and Piccinini), 1905, A., i, 706.
**3-Phenyl-5-cuminylidenerhodanine** (Nägele), 1912, A., i, 795.
**Phenyl-ψ-cumylhydrazine**, 5-chloro-2-nitro-, and *op-di*nitro- (Willgerodt and Herzog), 1905, A., i, 549.
**2-Phenyl-4-cumylideneoxazolone** (Erlenmeyer and Matter), 1905, A., i, 238.
**Phenyl-ψ-cumyliodonium hydroxide**, salts of (Willgerodt and Meyer), 1912, A., i, 22.
**Phenyl-ψ-cumyloxamide** (Suida), 1910, A., i, 665.
**Phenylcyanamide**, amino- (*α-cyanophenylhydrazine*) (Pellizzari), 1907, A., i, 874.
condensation of, with aldehydes and ketones (Rolla), 1907, A., i, 875.
*o*-, *m*-, and *p*-bromo- (Pierron), 1907, A., i, 121.
*p*-iodo-, and the carbamide (Pierron), 1908, A., i, 925.
*o*-, *m*-, and *p*-nitro-, and their benzoyl derivatives (Pierron), 1905, A., i, 125.
**Phenylcyanoacetic acid** and its ethyl ester and amide (Hessler), 1904, A., i, 830.
lead and calcium salts (Hadley), 1912, A., i, 699.
**Phenyl-α-cyanoacrylamide**, 3:4-*di*hydroxy-, and its 3-methyl ether, bromo-derivatives of (Piccinini), 1905, A., i, 599.
**Phenylcyanocarbamide**, *p*-bromo-, and its copper and potassium salts, and silver-ammonia derivative (Böeseken and Couvert), 1910, A., i, 644.
**Phenylcyanocarbodi-imide**, imino-ether of (Kämpf), 1904, A., i, 535.
**Phenyl-α-cyanoethyl-carbamide** and **-thiocarbamide** (Delépine), 1904, A., i, 149.
**Phenylcyanomethylenecamphor** and its derivatives (Forster and Withers), 1911, P., 327; 1912, T., 1337.
**β-Phenylcyanovinylacetic acid**, *m*-nitro- (Issoglio), 1904, A., i, 525.
**2-Phenyl-*p*-cymene** (Klages and Sommer), 1906, A., i, 567.
optical constants of, and its **sulphonic acid** and its derivatives (Klages), 1907, A., i, 598.
**β-Phenyldesoxyn** (Nastukoff), 1907, A., i, 413.
***N*-Phenyldiacetonitrile** and its phenylhydrazine derivative, and *m*- and *p*-chloro- and *p*-hydroxy-derivatives (v. Meyer and Schumacher), 1908, A., i, 909.
**Phenyldialkylcarbinol-*o*-sulphon-ethyl-** and **-methyl-amides** and their derivatives (Sachs, v. Wolff, and Ludwig), 1904, A., i, 876.
**α-Phenyl-αγ-dialkylsulphonehexan-γ-ones** (Posner), 1904, A., i, 324.
***a*-Phenyl-*bb*-di-*sec.*-amylcarbamide** (Mailhe), 1905, A., i, 635.
**Phenyldi*iso*amylcarbinol** (Schorigin), 1907, A., i, 754.
**Phenyldi-*p*-anisylcarbinol** and its derivatives (v. Baeyer, Villiger, and Hallensleben), 1903, A., i, 812.
chloride hydrochloride (Gomberg and Cone), 1910, A., i, 58.
**Phenyldi-*o*- and -*m*-anisylcarbinols** (v. Baeyer), 1907, A., i, 760.
**Phenyldi-*o*-anisylmethane** (v. Baeyer), 1907, A., i, 760.
***ms*-Phenyl-1:2:1′:2′-dianthracenexanthen** (Ullmann and Ürményi), 1912, A., i, 717.
***ms*-Phenyl-1:2:1′:2′-dianthraquinonexanthen** (Ullmann and Ürményi), 1912, A., i, 717.
**Phenyldiazoaminobenzene** and its salts (Vignon and Simonet), 1904, A., i, 637.
bromo-, chloro-, iodo-, and nitro-derivatives (Vignon and Simonet), 1904, A., i, 1065.
**Phenyldiazo-1:2:4-triazole** hydrate (Manchot), 1910, A., i, 442.
**6-Phenyl-2:3:7:0-diazpyridazine**, 4-hydroxy-. See 5-Phenyl-1:2:4:9-benzotetrazole, 7-hydroxy-.
**1-Phenyl-2:5-dibenzhydryl-1:3:4-triazole**, and *di-ω*-chloro- (Stollé and Laux), 1911, A., i, 509.
**1-Phenyl-2:5-dibenzhydryl-1:3:4-triazole**, 1-*p*-hydroxy- (Stollé and Schmidt), 1912, A., i, 1035.
**9-Phenyldibenzopyronium** and its derivatives (Decker and Felser), 1908, A., i, 1003.
**Phenyldibenzylazonium** bromide (Ponzio and Valente), 1908, A., i, 458.

**Phenyldibenzylcarbinol** (Klages and Heilmann), 1904, A., i, 488.
  preparation of (Davies and Kipping), 1911, T., 299.

*dl*-, *d*-, and *l*-*α*-**Phenyl**-*N*-**dibenzylethylamines** and their salts (Parck), 1912, A., i, 759.

**Phenyldibenzylethylcarbinol** and its chloride (Orechoff and Konowaloff), 1912, A., i, 436.

*α*-**Phenyl**-*αβ*-**dibenzylhydrazine**, acetyl and benzoyl derivatives of (Franzen and Kraft), 1911, A., i, 817.

**2-Phenyl-1:3-dibenzylhydrobenziminazole**, *o*-hydroxy- (Fischer and Veiel), 1905, A., i, 246.

**1-Phenyl-2:4-dibenzylidene***cyclo***pentan-3-one** (Borsche and Menz), 1908, A., i, 149.

**Phenyldibenzyl-methyl- and -methyl-ethyl-ammonium** methyl sulphates (Fröhlich), 1909, A., i, 376.

**5-Phenyl-2:4-dibenzylpyrimidine**, 6-amino- (*cyanbenzyline*) (v. Walther), 1903, A., i, 582.
  formation of (Atkinson and Thorpe), 1906, T., 1931.

**Phenyldibutylhydrazine** bromide and iodide (Allain Lecanu), 1905, A., i, 376.

**Phenyldicamphorylcarbinol** (Malmgren), 1903, A., i, 711.

**Phenyldicinnamylmethylammonium** chloride and platinichloride (Emde and Franke), 1909, A., i, 709.

**5-Phenyl-3:4-dicumylphenol** and its acetate (Garner), 1904, A., i, 253.

**Phenyl**-*p*-**diethylaminobenzylideneacetonitrile** and *p*-nitro- (Sachs and Michaelis), 1906, A., i, 576.

**Phenyldiethylaminodimethylcarbinol** (Riedel), 1906, A., i, 632.

**Phenyldiethylammonium** *per*iodides (Strömholm), 1903, A., i, 462.
  platinibromide (Gutbier, Bauriedel, and Obermaier), 1911, A., i, 33.

**Phenyldiethylarsine** dibromide and di-iodide (Winmill), 1912, T., 720.

**1-Phenyl-5:5-diethylbarbituric acid** (Fischer and Dilthey), 1905, A., i, 36; (Conrad and Zart), 1905, A., i, 753.

**1-Phenyl-5:5-diethylbarbituric acid**, 4-imino- (Conrad and Zart), 1905, A., i, 753.

**Phenyldiethylbenzamidine** and its additive salts (v. Braun), 1904, A., i, 688.

**Phenyldiethylcarbinol** (Kling), 1904, A., i, 2; (Grignard), 1904, A., i, 214.

**Phenyldiethylcarbinol** and its chloride (Klages), 1904, A., i, 28.

**Phenyldiethylcarbinol**, *o*-hydroxy-, and its methyl ether (Mounié), 1903, A., i, 482.

**Phenyldiethylcarbinylacetic acid.** See *α*-Phenyl-*β*-ethylvaleric acid.

**Phenyl**-*αβ*-**diethylhydrazine** (Tichwinsky), 1905, A., i, 92, 93.
  and its benzoyl derivative and nitrosoamine (Bamberger and Tichwinsky), 1903, A., i, 131; (Tichwinsky), 1903, A., i, 442.

*α*-**Phenyl**-*ββ*-**diethylhydrazine** (Tichwinsky), 1905, A., i, 93.
  and its derivatives (Wieland and Fressel), 1911, A., i, 495.

**Phenyldiethylmethane** (*α-ethylpropylbenzene*) and its **sulphonic acid** and amide (Klages), 1904, A., i, 28.

*α*-**Phenyl**-*ββ*-**di**-*p*-**ethylphenylpropionic acid** and its ethyl ester (Bistrzycki and Mauron), 1910, A., i, 845.

*β*-**Phenyl**-*αα*-**diethylpropiophenone** (Haller and Bauer), 1910, A., i, 490.

*β*-**Phenyl**-*αα*-**diethylpropionyl** chloride (Haller and Bauer), 1910, A., i, 490.

**1-Phenyl-4:4-diethyl-5-pyrazolone**, 3-hydroxy-, and its imide and acetyl and methyl ethers (Conrad and Zart), 1906, A., i, 609.

**Phenyldiethylsilicol** (Kipping and Hackford), 1911, T., 141; P., 9.

**Phenyldiethyltriazan.** See Ethylaniline.*

**1-Phenyl-3:5-diethylurazole** (Wheeler and Johnson), 1903, A., i, 693.

**Phenyldiguaiacylmethane** (Manchot), 1910, A., i, 314.

**Phenyldiguanide**, amino- and nitro-derivatives, and their additive salts (Hermann), 1905, A., i, 950.
  *p*-hydroxy-, salts of (A. and L. Lumière and Perrin), 1905, A., i, 250.
  *m*-nitro-, and its salts (Cohn), 1911, A., i, 928.

**Phenyldiguanide**-*p*-**carboxylic acid**, ethyl ester, and salts of (Cohn), 1911, A., i, 929.

**Phenyldiguanide**-*o*-**carboxylic anhydride** and its hydrochloride (Cohn), 1911, A., i, 929.

**Phenyldi***cyclo***hexylcarbinol** (Godchot), 1910, A., i, 105.

**Phenyldi***cyclo***hexylmethane**, preparation of (Godchot), 1909, A., i, 19.

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* A correction; not a synonym.

**Phenyldi*cyclo*hexylmethane,** nitro-derivatives of (Godchot), 1910, A., i, 104.

**10-Phenyldihydroacridine** (Ullmann and Maag), 1907, A., i, 639.

**Phenyldihydroanthranil** (Baezner and Gardiol), 1906, A., i, 673.

**Phenyldihydro-1:3-benzoxazine,** acylsalicylamide and acylhydroxyamine groups, labile isomerism among (Titherley and Hicks), 1909, T., 908; P., 95.

**2-Phenyldihydro-1:3-benzoxazine-4-one,** preparation and reactions of (Titherley), 1907, T., 1425; P., 203.

**2-Phenyldihydro-1:3-benzoxazine-4-one,** 6-bromo- (Hughes and Titherley), 1910, P., 344; 1911, T., 23.
  6-chloro- (Titherley and Hughes), 1910, T., 1374; P., 175.

**α-Phenyldihydroberberine** (Merck), 1907, A., i, 435.
  and its salts (Freund and Beck), 1905, A., i, 151.

**β-Phenyldihydrocampholenic acid,** synthesis of (Eykman), 1908, A., i, 23.

**3-Phenyldihydro*iso*coumarin,** 4-bromo-4-cyano- (Gyr), 1907, A., i, 417.

**4-Phenyldihydro-1:2:3:4:6-dioxatriazine,** 3:6-*di*hydroxy-, and its salts (Jovitschitsch), 1907, A., i, 99.

**1-Phenyl-4:5-dihydro-5-glyoxalone-2-carboxyanilide,** 4-oximino- (Dimroth and Dienstbach), 1909, A., i, 64.

**2-Phenyldihydro*iso*indole,** methiodide of (Scholtz and Wolfrum), 1910, A., i, 772.

**Phenyldihydro*iso*lauronolic acid,** synthesis of (Eykman), 1908, A., i, 23.

**11-Phenyldihydronaphthacenequinone,** 6:6:11:(?′)-*tetra*hydroxy-, and its acetyl derivative (Voswinckel), 1909, A., i, 167.

**7-Phenyldihydro-β-naphthacridine** and *m*- and *p*-nitro- (Haase), 1903, A., i, 366; (Ullmann and Fetvadjian), 1903, A., i, 521.

**Phenyldihydronaphthaquinolinedicarboxylic acid,** ethyl ester (Simon and Mauguin), 1906, A., i, 888.

**2-Phenyldihydronaphthatriazine,** imino-, hydrochloride of (Pierron), 1908, A., i, 926.

**1-Phenyl-1:3-dihydro-2-perimidone,** *op*-*di*nitro- (Sachs and Forster), 1911, A., i, 755.

*as*-*N*-**Phenyldihydrophenanthraphenazine,** acetyl derivative (Hinsberg), 1909, A., i, 845.

**10-Phenyldihydrophenazine,** 1:3:7-*tri*amino-, and 1:3:7-*tri*nitro- (Kehrmann and Riera y Punti), 1911, A., i, 926.

**7-Phenyldihydro-αβ-phenonaphthacridine,** 10-hydroxy-, and its acetyl derivative (Pope and Howard), 1910, T., 976.

**2-Phenyl-1:2-dihydrophthalazine,** 1-hydroxy-, and its ethers (Thiele and Falk), 1906, A., i, 751.

**3-Phenyldihydropyrazoquinazolone,** 6-amino-, and its benzylidene derivative, 4:6-*di*chloro-, and 6-oximino- (Michaelis and Leo), 1910, A., i, 515.

**4-Phenyl-$\Delta^{3:6}$-dihydropyridone,** cyano-6-hydroxy-, and its metallic derivatives (Guareschi), 1905, A., i, 824.

**4-Phenyl-$\Delta^{3:6}$-dihydropyridones,** *m*- and *p*-nitro-3:5-*di*cyano-6-hydroxy-, and their salts (Issoglio), 1904, A., i, 525.

**3-Phenyldihydroquinazoline** (*orexine*), benzoylation of (Heller and Kühn), 1904, A., i, 943.

**2-Phenyl-3:4-dihydro-4-quinazolone** (v. Walther), 1903, A., i, 583; (Finger and Schupp), 1906, A., i, 901; (Finger), 1907, A., i, 876.

**2-Phenyl-3:4-dihydro-4-quinazolone,** *o*-amino-, and its acetyl derivative (Mohr and Köhler), 1910, A., i, 116.

**3-Phenyl-3:4-dihydro-4-quinazolone,** 2-amino- and 2-chloro- (Wheeler, Johnson, and McFarland), 1903, A., i, 860.

**1-Phenyl-3:4-dihydro*iso*quinoline,** salts of (Decker and Kropp), 1909, A., i, 513; (Pictet and Kay), 1909, A., i, 514.

**1-Phenyl-1:2-dihydro-2-quinoxalone** and its **3-carboxylic acid** (Kühling and Kaselitz), 1906, A., i, 463.

**1-Phenyl-1:2-dihydro-2-quinoxalone,** 6-amino-, and its diacetyl derivative, and 6-nitro- (Reissert and Goll), 1905, A., i, 247.

**Phenyldihydroresorcinol** and its oximes (Gittel), 1906, A., i, 171.
  *O*- and *C*-acetyl derivatives and their reactions (Dieckmann and Stein), 1904, A., i, 874.

**Phenyldihydrothebaine** and its additive salts, methyl and ethyl ethers, and acetyl derivative, and their methiodides (Freund), 1905, A., i, 918.

**Phenyldihydrothebenol** and its methyl and ethyl ethers (Freund), 1905, A., i, 918.

**1-Phenyl-4:5-dihydro-1:2:4-triazole,** 3-amino-5-thio- (Fromm and Schneider), 1906, A., i, 714.

**Phenyldihydro-uracil** and **-thiouracil** (Posner), 1905, A., i, 578, 776.

**Phenyldi-*o*-hydroxybenzilosazones,** *p*-bromo-, α- and β-, and their acetyl derivatives (Biltz and Sieden), 1903, A., i, 120.

**Phenyldi-α-hydroxybenzylfulvene** (Thiele and Balhorn), 1906, A., i, 640.

**Phenyldi-β-hydroxynaphthylmethane,** anhydride of, and its nitration, and the action of sulphuric acid on (MacKenzie and Joseph), 1904, T., 793; P., 124.

**α-Phenyl-3:4-dimethoxycinnamic acid,** *o*-bromo-2-amino- and *o*-bromo-2-nitro- (Pschorr and Popovici), 1906, A., i, 850.

**2-Phenyl-4-di-*m*-methoxyphenyl-1:4-benzopyranol,** 5:7-*di*hydroxy-, and its salts (Bülow and Riess), 1904, A., i, 82.

**Phenyl-2:5-dimethoxyphenylethylcarbinol** (Kauffmann and Grombach), 1905, A., i, 281.

**α-Phenyl-α-2:5-dimethoxyphenylpropylene** and its bromo-derivatives (Kauffmann and Grombach), 1905, A., i, 281.

**1-Phenyl-2:5-di-*p*-methoxyphenyl-1:3:4-triazole** (Stollé and Bambach), 1906, A., i, 710.

**Phenyldimethylacetic acid.** See α-Phenyl-α-methylpropionic acid.

**9-Phenyl-2:7-dimethylacridine** and its hydride and *m*- and *p*-amino- and *m*- and *p*-nitro- (Ullmann and Weintraub), 1903, A., i, 519.

**5-Phenyl-3:7-dimethylacridine,** 2:8-*di*amino-. See Benzoflavine.

  2:8-*di*hydroxy-. See Benzoflavol.

**Phenyldimethylallylammonium** compounds, resolution of (Harvey), 1904, T., 412; P., 64.

  bromide, *p*-bromo-, rate of formation and decomposition of, in various solvents (v. Halban), 1909, A., ii, 722.

**β-Phenyl-αα-dimethyl-β-allyl methyl ketone** and its semicarbazone (Courtot), 1906, A., i, 556.

**Phenyl-*p*-dimethylaminobenzylideneacetonitrile,** *p*-nitro- (Sachs and Lewin), 1903, A., i, 39.

**Phenyl α-dimethylaminobenzyl ketone** and its salts (Rabe and Rieper), 1912, A., i, 718.

**Phenyldimethylaminodimethylcarbinol** (Riedel), 1906, A., i, 632.

**Phenyldimethylaminoethylcarbinol** and its additive salts and benzoyl derivative (Fourneau), 1905, A., i, 57.

**Phenyl dimethylaminomethyl ketone,** *p*-hydroxy-, and its hydriodide (Voswinckel), 1912, A., i, 443.

**δ-Phenyl-α-*p*-dimethylaminophenyl-$\Delta^{\alpha\gamma}$-butadiene** (Sachs and Weigert), 1907, A., i, 1048.

**Phenyldimethylaminophenylmethane,** α-*di*chloro-, and its hydrochloride (Staudinger), 1909, A., i, 907.

**γ-Phenyl-α-*p*-dimethylaminophenyl-$\Delta^{\alpha}$-propen-γ-ol** (Sachs and Weigert) 1907, A., i, 1048.

**β-Phenyl-β-*p*-dimethylaminophenylpropionic acid** and its salts (Fosse), 1907, A., i, 136.

**3-Phenyl-5-*p*-dimethylaminostyryl*cyclo*hexan-1-one-2-carboxylic acid,** ethyl ester (Borsche), 1910, A., i, 684.

**3-Phenyl-5-*p*-dimethylaminostyryl-$\Delta^{5}$-*cyclo*hexen-1-one-2-carboxylic acid,** benzoyl derivative of its ethyl ester (Borsche), 1910, A., i, 684.

**Phenyl-6-dimethylamino-*m*-tolylmethane,** 4′-amino- (v. Braun and Kruber), 1912, A., i, 969.

**Phenyldimethylammonium** iodide, action of chlorine on (Werner), 1906, T., 1638; P., 258.

  platinibromide (Gutbier, Bauriedel, and Obermaier), 1911, A., i, 33.

**Phenyldimethylarsine** di- and tetrabromides (Winmill), 1912, T., 723.

**2-Phenyl-1:3-dimethylbenziminazole,** 6-chloro- and 6- and *o*-, *m*-, and *p*-nitro-, salts, and carbinols of (Fischer and Limmer), 1906, A., i, 897.

**1-Phenyl-2:3-dimethylbenziminazolium** chloride, 4:7-*di*nitro-6-hydroxy-1-*p*-chloro- (Meldola and Kuntzen), 1911, T., 2040.

  hydroxide, 4:7-*di*nitro-6-hydroxy-, and its salts (Meldola and Kuntzen), 1911, T., 1290.

**2-Phenyl-1:3-dimethylbenziminazolium** iodide and **-2:3-dihydrobenziminazol-2-ol** and its salts (Fischer and Römer), 1906, A., i, 540.

**1-Phenyl-2:3-dimethylbenziminazolol,** 5-nitro- (v. Walther and Kessler), 1906, A., i, 898.

  4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 1295.

  4:7-*di*nitro-6-hydroxy-1-*p*-chloro- (Meldola and Kuntzen), 1911, T., 2040.

**1-Phenyl-2:3-dimethyl-6-benziminazolone,** 4:7-*di*nitro-1-*p*-chloro- (Meldola and Kuntzen), 1911, T., 2040.

**4-Phenyl-2:6-dimethyl-1:3:7:9-benzotetrazole** (Bülow and Haas), 1910, A., i, 203.

**1-Phenyl-3:6-dimethyl-1:2:7-benzotriazole**, 4-hydroxy-, and its salts (Bülow and Haas), 1911, A., i, 88.

**3-Phenyl-1-*op*-dimethylbenzyl-2-methyl-5-pyrazolone** (Curtius and Mayer), 1912, A., i, 309.

**3-Phenyl-1-*op*-dimethylbenzyl-2-methyl-6-pyridazinone** (Curtius and Mayer), 1912, A., i, 309.

**3-Phenyl-1-*op*-dimethylbenzyl-5-pyrazolone**, and 4-nitro-, and 4-oximino-, and their silver salts (Curtius and Mayer), 1912, A., i, 309.

**Phenyl-2:4-dimethylbenzylthiosemicarbazide** (Curtius and Mayer), 1912, A., i, 308.

**Phenyldimethylbetaine** and its additive derivatives (Willstätter and Kahn), 1904, A., i, 236.

**Phenyldimethyl-*m*-bis*cyclo*hexenone** and its dioxime and phenylhydrazone (Knoevenagel), 1903, A., i, 637.

**1-Phenyl-2:4-dimethyl-3-bromomethyl-5-pyrazolone** (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 257.

**1-Phenyl-2:4-dimethyl-3-bromomethyl-5-pyrazolone**, *p*-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 78.

**1-Phenyl-2:4-dimethyl-5-bromomethyl-3-pyrazolone** (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 523.

**α-Phenyl-βγ-dimethylbutadiene** (Kohler), 1907, A., i, 140.

**γ-Phenyl-ββ-dimethylbutan-γ-ol** (Ramart-Lucas), 1910, A., i, 378.

**β-Phenyl-αα-dimethyl-$\Delta^{\beta}$-butenoic acid** (*phenyldimethylvinylacetic acid*), and its derivatives (Courtot), 1906, A., i, 555.

**γ-Phenyl-ββ-dimethyl-$\Delta^{\gamma}$-butenol** and its acetate (Courtot), 1906, A., i, 556.

**Phenyldimethylbutenolide** (Blaise and Courtot), 1906, A., i, 928.

**Phenyldimethyl-*n*-butylammonium** iodide, *p*-bromo- (Everatt), 1908, T., 1233.

**1-Phenyl-4:4-dimethyl-3-*tert.*-butyl-5-pyrazolone** (Wahlberg), 1911, A., i, 708.

**β-Phenyl-αα-dimethylbutyric acid** (*β-phenyl-β-methylpivalic acid*), *βγ-di*bromo-, and β-hydroxy-, ethyl ester (Courtot), 1906, A., i, 555.

**β-Phenyl-αα-dimethylbutyrolactone** (Blaise and Courtot), 1905, A., i, 563.

**β-Phenyl-αα-dimethylbutyrolactone**, β-bromo- and γ-hydroxy- (Blaise and Courtot), 1906, A., i, 928.

β-hydroxy- (Courtot), 1906, A., i, 927.

**Phenyldimethylcarbinol** (Matsubara and Perkin), 1905, T., 671.

**Phenyldimethylcarbinol**, amino- (Riedel), 1908, A., i, 251.

**1-Phenyl-2:4-dimethyl-3-chloromethyl-5-pyrazolone** (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 257.

**Phenyldimethylcyanomethylammonium** iodide (v. Braun), 1908, A., i, 628.

**9-Phenyl-2′:10-dimethyldihydronaphthacridine** (Freund and Bode), 1909, A., i, 515.

**2-Phenyl-4:6- and -5:6-dimethyl-1:2-dihydropyridone**, 3-hydroxy- (Thole and Thorpe), 1911, T., 2237.

**3-Phenyl-2:6-dimethyl-3:4-dihydro-4-quinazolone**, 7-amino-, acetyl derivative (Bogert and Kropff), 1909, A., i, 843.

**2-Phenyl-1:2-dimethyldihydroquinoline** and its picrate (Freund and Richard), 1909, A., i, 418.

**1-Phenyl-4:5-dimethyldihydrouracil**, 4-bromo-5-hydroxy- (Bremer), 1911, A., i, 161.

**Phenyldimethylethylammonium** salts (Willcox), 1905, A., i, 45.

iodide, compound of thiocarbamide and (Atkins and Werner), 1912, T., 1990.

**1-Phenyl-3:6-dimethyl-4-ethyl-1:2:7-benzotriazole**, 4-hydroxy- (Bülow and Haas), 1911, A., i, 89.

**Phenyldimethylethylene** and its dibromide (Blaise and Courtot), 1906, A., i, 794.

**Phenyldimethylethyl-1-ethyl-ψ-dithiobiurets** (Billeter and Rivier), 1905, A., i, 50.

**Phenyldi-2-methyl-1-ethylindylmethane**, *o*-hydroxy- and *o*-nitro- (Freund and Lebach), 1905, A., i, 665.

**1-Phenyl-2:4-dimethyl-4-ethyl-3:5-pyrazolidone** (*methylethylmalonylantipyrine*) (Michaelis and Schenk), 1909, A., i, 59.

**1-Phenyl-2:4-dimethyl-3-ethylpyrazolone** (Emmerling and Kristeller), 1906, A., i, 623.

**1-Phenyl-2:3-dimethyl-4-ethyl-5-pyrazolone**, *p*-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 340.

**Phenyldimethylethylsilicane** (Bygdén), 1912, A., i, 342.

**1-Phenyl-3:4-dimethyl-5-ethyl-thiol- and -sulphone-pyrazoles** (MICHAELIS, BESSON, MOELLER, and KOBER), 1904, A., i, 784.

**δ-Phenyl-*αα*-dimethyl-fulgenic acid** and **-fulgide** (STOBBE and LENZNER), 1906, A., i, 22.

o-, *m*-, and *p*-nitro-, and their salts (STOBBE and LEUNER), 1906, A., i, 183.

**α-Phenyl-δδ-dimethylfulgide,** *p*-chloro- (STOBBE and WAHL), 1911, A., i, 375.

**Phenyl-1:3-dimethylglyoxalone-4:5-glycol,** 4:5-*di*bromo- (BILTZ and BEHRENS), 1910, A., i, 589.

**γ-Phenyl-ζζ-dimethylheptan-ε-one** and its oximes (KOHLER), 1907, A., i, 1052.

**δ-Phenyl-βζ-dimethyl-$\Delta^{\gamma}$-heptene** and its bromine compound (SCHORIGIN), 1907, A. i, 754.

**4-Phenyl-1:1-dimethyl*cyclo*hexane-2:6-dione** and its dioxime and diphenylhydrazone and its **3:5-dicarboxylic acid,** ethyl ester, and its reactions (DIECKMANN and KRON), 1908, A., i, 388.

**2-Phenyl-1:1-dimethyl*cyclo*hexane-3:5-dione** (BORSCHE), 1910, A., i, 36.

**Phenyldimethyl*cyclo*hexanol** (KOHLER), 1907, A., i, 536.

**γ-Phenyl-δδ-dimethyl-$\Delta^{\beta}$-hexene** (RAMART-LUCAS), 1911, A., i, 636.

**4-Phenyl-1:3-dimethylhydantoin** (GABRIEL), 1907, A., i, 91.

**3-Phenyl-5:5-dimethylhydantoin** (BAILEY and RANDOLPH), 1908, A., i, 742.

and 1-amino-, and its benzylidene derivative (BAILEY and BROOKS), 1908, A., i, 842.

**Phenyldimethylhydrazine iodide** (ALLAIN LECANU), 1905, A., i, 376.

**α-Phenyl-*αβ*-dimethylhydrocinnamic acid.** See *αβ*-Diphenyl-*α*-methylbutyric acid.

**1-Phenyl-2:4-dimethyl-3-hydroxymethyl-5-pyrazolone,** *p*-amino-, and *p*-nitro-, and its acetate (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1910, A., i, 78.

**1-Phenyl-2:4-dimethyl-3-hydroxymethylpyrazolonedi-ω-acetic acid,** *p*-amino- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1910, A., i, 340.

**1-Phenyl-2:3-dimethyliminopyrazole.** See Iminopyrine.

**s-*C*-Phenyl-di-*C*-methyliminotriacetic acid** (STADNIKOFF), 1909, A., i, 771.

**Phenyldi-2-methyl-indyl- and -indolidene-methanes,** chloro-, hydroxy-, and nitro-derivatives (FREUND and LEBACH), 1905, A., i, 655.

**1-Phenyl 3:4-dimethyl-5-methylsulphonepyrazole,** bromo- (MICHAELIS, BESSON, MOELLER, and KOBER), 1904, A., i, 784.

**Phenyl-*B*-dimethylnaphthasafranine,** *p*-amino- (FISCHER and HEPP), 1903, A., i, 60.

**6-Phenyl-3:4-dimethyl-1:2:5-oxadiazine,** 4-hydroxy-, and its derivatives (DIELS and VAN DER LEEDEN), 1905, A., i, 947.

**Phenyldimethyl*iso*oxazolone** (HALLER and BAUER), 1911, A., i, 568.

**1-Phenyl-2:5-dimethyl-2:3-oxypyrazole** (3-*antipyrine*) and its ψ-methiodide (MICHAELIS and MEYER), 1905, A., i, 378.

**1-Phenyl-2:5-dimethyl-2:3-oxypyrazole,** 1-*m*-amino-, 1:*p*-*di*amino-, *p*-bromo-, 4′:4-*di*bromo-, 4-bromo-*m*-nitro-, *m*-nitro-, 1:*p*-*di*nitro-, 4-nitro-*p*-bromo-, and their derivatives (MICHAELIS and STIEGLER), 1908, A., i, 212.

5-chloro- (MICHAELIS and SCHENK), 1909, A., i, 58.

**β-Phenyl-βδ-dimethylpentane** (SCHREINER), 1910, A., i, 661.

**γ-Phenyl-ββ-dimethylpentan-γ-ol** (RAMART-LUCAS), 1911, A., i, 636.

**δ-Phenyl-*αα*-dimethyl-$\Delta^{\beta}$-pentenoic acid** (*γ-benzyl-αα-dimethylvinylacetic acid*) and its derivatives (BLAISE and COURTOT), 1906, A., i, 554.

**Phenyl-βδ-dimethylpentylthiocarbamide** (CHONIN), 1909, A., i, 450.

**5-Phenyl-2:8-dimethylphenazonium,** and 3-amino-, and 3:7-*di*amino-, and their salts (ORLOFF), 1911, A., i, 89.

**6-Phenyl-2:2-dimethylpiperidone** (*benzylidenediacetoneamine*), 1-nitroso- (KOHN and WENZEL), 1907, A., i, 238.

**α-Phenyl-ββ-dimethylpropane,** α-bromo- (LEPIN), 1912, A., i, 957.

**1-Phenyl-2:2-dimethyl*cyclo*propane** (RAMART-LUCAS), 1911, A., i, 636.

**γ-Phenyl-ββ-dimethylpropane-αγ-diol** (FRANKE and KOHN), 1907, A., i, 171.

**β-Phenyl-*αα*-dimethylpropionic acid** and its amide, and nitro-derivative (HALLER and BAUER), 1909, A., i, 655.

**β-Phenyl-*αα*-dimethylpropionyl** chloride (HALLER and BAUER), 1910, A., i, 490.

**β-Phenyl-*αα*-dimethylpropyl alcohol** (LEPIN), 1912, A., i, 958.

**Phenyl-*αα*- and -*αβ*-dimethylpropylsulphones** (POSNER and TSCHARNO), 1905, A., i, 279.

**3-Phenyl-1:2-dimethylpyrazole**, 2:5-thio- (iso*thiopyrine*) and its derivatives (Michaelis and Dorn), 1907, A., i, 249.

**1-Phenyl-2:5-dimethylpyrazole**, 1-*m*-nitro-2:3-thio- (Michaelis and Stiegler), 1908, A., i, 213.

2:3-thio- (3-*thiopyrine*) and its salts and alkyl haloids (Michaelis and Hahn), 1905, A., i, 378.

**1-Phenyl-3:4-dimethylpyrazole** (Michaelis, Besson, Moeller, and Kober), 1904, A., i, 783.

and its salts (Stoemer and Martinsen), 1907, A., i, 446.

**1-Phenyl-3:5-dimethylpyrazole**, *p*-bromo-4-nitroso- and 4-nitroso- (Sachs and Alsleben), 1907, A., i, 357.

4-nitro- and 4-nitroso- (Wolff, Bock, Lorentz, and Trappe), 1903, A., i, 210.

**1-Phenyl-4:5-dimethylpyrazole**, 3-chloro-, and 3-iodo-, methiodide of (Michaelis and Drews), 1907, A., i, 157.

**1-Phenyl-3:5-dimethylpyrazoleimino-3′-phenyl*iso*oxazolone** (Meyer), 1911, A., i, 687.

**1-Phenyl-3:3-dimethyl-5-pyrazolidone** (Prentice), 1904, T., 1667; P., 220.

**1-Phenyl-4:4-dimethyl-3:5-pyrazolidone** (Perkin), 1903, T., 1225.

3-benzoyl and 3-benzenesulphonyl derivatives (Michaelis and Schenk), 1909, A., i, 58.

**1-Phenyl-2:3-dimethylpyrazolone**, 5-imino-. See Iminopyrine.

2:5-thio- (*thiopyrine*) and its additive salts and trioxide (Michaelis), 1904, A., i, 780.

benzeneazo-derivatives of (Michaelis and Schlecht), 1906, A., i, 614.

-*o*-, -*m*-, and -*p*-amino-, -*p*-4-*di*amino-, -*o*-, -*m*-, and -*p*-nitro-, -*p*-4-*di*nitro-, and their salts and derivatives (Michaelis, Graff, Gesing, and Boie), 1911, A., i, 234.

**1-Phenyl-2:5-dimethylpyrazolone**, 3-imino-, and its carbonate and picrate (Stolz), 1904, A., i, 114.

**1-Phenyl-4:5-dimethyl-3-pyrazolone** and its benzenesulphonyl derivative (Michaelis and Drews), 1907, A., i, 157.

**1-Phenyl-2:3-dimethyl-5-pyrazolone.** See Antipyrine.

**1-Phenyl-2:4-dimethyl-5-pyrazolone** (Stolz), 1905, A., i, 942.

**1-Phenyl-3:4-dimethyl-5-pyrazolone**, 1-*p*-amino-, and its acetyl derivative (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 136.

**1-Phenyl-4:4-dimethyl-5-pyrazolone** (Blaise and Marcilly), 1904, A., i, 286.

**1-Phenyl-4:4-dimethyl-5-pyrazolone**, 3-hydroxy- (Michaelis and Schenk), 1907, A., i, 966.

**1-Phenyl-2:3-dimethyl-5-pyrazolones**, soluble compounds from (Riedel), 1910, A., i, 433.

**Phenyldimethylpyrazoloneazophenyl*iso*oxazolone** (Meyer), 1911, A., i, 341.

**1-Phenyl-4:4-dimethylpyrazolone-3-carboxylic acid**, ethyl ester (Rassow and Bauer), 1909, A., i, 632.

**1-Phenyl-2:3-dimethyl-5-pyrazolone-diacetic and -dipropionic acids**, amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1903, A., i, 866.

**α-Phenyl-δ-(4:6-dimethyl-2-pyridyl)-butadiene** and its aurichloride (Proske), 1909, A., i, 413.

**4-Phenyl-2:6-dimethylpyroxonium** salts (v. Baeyer and Piccard), 1911, A., i, 901.

**β-Phenyl-αα-dimethylsuccinic acid**, hemialdehyde oxime and semicarbazone, and hemialdehydeazine of (Blaise and Courtot), 1906, A., i, 928.

**Phenyldimethylsulphine** platinichloride (Kehrmann and Duttenhöfer), 1906, A., i, 949.

**3-Phenyl-2:5-dimethyltetrahydrofuran**, 3-hydroxy- (Dupont), 1912, A., i, 291.

**4-Phenyl-3:6-dimethyltetrahydro-1:3-oxazine** and its aurichloride (Kohn), 1907, A., i, 680.

**3-Phenyldimethyl-2-thiohydantoins**, 1-amino-, and their derivatives (Bailey, Acree, and Miller), 1904, A., i, 826.

**1-Phenyl-3:5-dimethyl-3-thiopyrazolone**, *p*-bromo- (Michaelis and Stiegler), 1908, A., i, 212.

**Phenyldimethylthiosemicarbazide** (Knorr and Köhler), 1906, A., i, 817.

**1-Phenyl-3:5-dimethyl-1:2:4-triazole** and its salts (Pellizzari), 1911, A., i, 1036.

**1-Phenyl-3:4-dimethyl-1:2:5-triazole**, amino- (v. Pechmann and Bauer), 1909, A., i, 271.

nitro- (v. Pechmann and Bauer), 1909, A., i, 271.

**δ-Phenyl-αα-dimethyl-γ-valerolactone**, β-hydroxy- (Blaise and Courtot), 1906, A., i, 554.

**α-Phenyl-ββ-dimethylvinyl** benzoate (Haller and Bauer), 1911, A., i, 727.
**9-Phenyl-2:7-** and **-3:6-dimethylxanthhydrols** and their salts (Kehrmann and Knop), 1912, A., i, 43.
**8-Phenyl-1:3-dimethylxanthine** (Traube and Nithack), 1906, A., i, 215.
**9-Phenyl-3:6-dimethylxanthonium-*o*-carboxylic acid**, methyl and ethyl esters, salts of (Kehrmann and Knop), 1912, A., i, 43.
**7-Phenyl-**$\begin{matrix}\alpha\text{—N—}\alpha\\ |\\ \beta\text{—CH—}\beta\end{matrix}$**-dinaphthacridine**,
  *m*-nitro-, and its additive salts (Senier and Austin), 1907, T., 1238; P., 186.
**Phenyldinaphthacridines** and their additive salts (Senier and Austin), 1906, T., 1395; P., 241.
**Phenyldinaphthaquino-xanthenol** chloride, hydrochloride (Gomberg and Cone), 1910, A., i, 57.
**Phenyldinaphthaxanthen**, amino- (Robyn), 1905, A., i, 608.
  *p*-hydroxy-, and its acyl derivatives (Rogoff), 1905, A., i, 884.
  *m*-nitro-, compound of, with benzene (Werner and Summerer), 1906, A., i, 437.
**Phenyldinaphthaxanthenol** and its salts (Gomberg and Cone), 1910, A., i, 57.
**Phenyldinaphthylmethane series**, colouring matters of the (Noelting), 1904, A., i, 621.
**Phenyldioxatriazine** and its reactions (Jovitschitsch), 1907, A., i, 98.
**3-Phenyldioxindole**, and *p*-bromo- (Kohn), 1910, A., i, 697.
**3-Phenyldioxindole**, 5-bromo- (Kohn and Ostersetzer), 1912, A., i, 51.
**Phenyldiphenylenecarbinol** (Ullmann and v. Wurstemberger), 1904, A., i, 154.
**α-Phenyl-δ-diphenylenefulgenic acid** (Stobbe, Badenhausen, Hennicke, and Wahl), 1911, A., i, 381.
**α-Phenyl-δ-diphenylenefulgide** (Stobbe, Badenhausen, Hennicke, and Wahl), 1911, A., i, 381.
**Phenyldiphenylenemethane.** See Phenylfluorene.
**Phenyldiphenylenemethyl** *per*oxide. See 9-Phenylfluoryl *per*oxide.
**1-Phenyl-2:3-*o*-diphenylene*cyclo*pentanone** and its phenylhydrazone (Lang), 1905, A., i, 292.
**s-Phenyldiphenylhydrazine**, transformation of (Dziurzynski), 1908, A., i, 696.
**α-Phenyl-β-*o*-diphenylmethanethiocarbamide** (Carré), 1909, A., i, 122.
**2-Phenyl-5-diphenylmethylbenziminazole** and its additive salts (Thomae), 1905, A., i, 587.
**β-Phenyl-β-diphenylmethylhydroxylamine** (Angeli, Alessandri, and Aiazzi-Mancini), 1911, A., i, 544.
**Phenyl diphenylstyryl ketone** (*diphenylbenzylideneacetophenone*) (Kohler), 1907, A., i, 1054.
**Phenyldipropylcarbinol** (Amouroux and Murat), 1912, A., i, 415.
  and its acetyl derivative (Murat and Amouroux), 1912, A., i, 528.
**Phenyldipropylhydrazine** bromide and iodide (Allain Lecanu), 1905, A., i, 375.
**1-Phenyl-4:4-dipropyl-5-pyrazolone**, 3-hydroxy-, and its dipropylmalonic phenylhydrazide (Conrad and Zart), 1906, A., i, 609.
**Phenyl-1:3-dipyridinium** chloride, 4:6-*di*nitro-, action of hydrogen sulphide on (Zincke and Weisspfenning), 1912, A., i, 302.
**1-Phenyl-3:5-dipyrrylpyrazolone** (Oddo and Dainotti), 1912, A., i, 721.
**Phenyldithiocarbamic acid**, methyl, ethyl, and propyl esters (Roschdestvensky), 1910, A., i, 107.
**Phenyl ββ-dithiolvinyl ketone**, salts and derivatives of (Kelber and Schwarz), 1912, A., i, 206.
**Phenyldi-*p*-tolylacetonitrile** (Vorländer, Friedberg, van der Merve, Rosenthal, Huth, and v. Bodecker), 1911, A., i, 867.
**Phenyldi-*p*-tolyl-carbinol** and **-methane** (Kliegl), 1905, A., i, 186.
**Phenyldi-*p*-tolylchloromethane** and its carbinol and peroxide (Gomberg and Lynn), 1904, A., i, 489.
**Phenyldi-*o*-tolylmethane**, *p*-diamino-, and its di- and tetra-acetyl derivatives (Vongerichten and Weilinger), 1904, A., i, 687.
**β-Phenyl-αα-di-*p*-tolylpropionic acid**, and its silver salt and methyl ester (Bistrzycki and Mauron), 1910, A., i, 845.
**1-Phenyl-3:5-ditolyltriazoles**, bromo- and chloro-derivatives, synthesis of (v. Walther and Krumbiegel), 1903, A., i, 661.
**α-Phenyl-ββ-di-*o*-xylylpropionic acid**, and its methyl ester (Bistrzycki and Mauron), 1910, A., i, 845.
**Phenylene** benzene-*m*-dithiolsulphonate (Tröger and Meine), 1904, A., i, 30.
  1:4-ditrichloromethylsulphoxide (Zincke and Frohneberg), 1909, A., i, 644.

**Phenylene** 1:4-dimethyldisulphoxide (Zincke and Frohneberg), 1909, A., i, 643.

*o*-**Phenyleneacetic-glycollic acid** and its ethyl ester (Czaplicki, v. Kostanecki, and Lampe), 1909, A., i, 235.

**Phenyleneacetic-malonic acid,** chloro-*tri*nitro-, ethyl ester (Jackson and Smith), 1904, A., i, 803.

*o*-**Phenyleneacetic-mandelic acid** and its ethyl hydrogen, and diethyl esters (Czaplicki, v. Kostanecki, and Lampe), 1909, A., i, 235.

*p*-**Phenyleneacetic-oxalacetic acid.** See ω-Carboxy-*p*-tolyloxalacetic acid.

*o*-**Phenyleneacetic-propionic acid** (Moore and Thorpe), 1908, T., 182; P., 13.

*p*-**Phenyleneacetic-pyruvic acid.** See ω-Carboxy-*p*-tolylpyruvic acid.

*m*-**Phenylenebidiguanide** and its picrate (Cohn), 1911, A., i, 929.

*m*-**Phenylenebisacetonylsulphone** and its dioxime and phenylhydrazones (Tröger and Meine), 1904, A., i, 30.

*m*-**Phenylenebisalkylsulphones** and their haloid derivatives (Tröger and Meine), 1904, A., i, 30.

**Phenylenebisaminoacetamides,** *m*- and *p*- (Lumière and Perrin), 1903, A., i, 832.

*p*-**Phenylenebisaminoanthraquinone** (Ullmann and Fodor), 1911, A., i, 467.
  preparation of (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 281.
  derivatives of (Laubé and König), 1909, A., i, 54.

*p*-**Phenylenebis-1- and -2-aminoanthraquinones** (Laube), 1907, A., i, 941.

*p*-**Phenylenebis-*o*-aminobenzoic acid** (Goldberg and Ullmann), 1906, A., i, 954.

*p*-**Phenylenebis-1-amino-2-hydroxy- and -2-methyl-anthraquinones** (Laubé and König), 1909, A., i, 55.

*o*-**Phenylenebis-1-amino-2-methylanthraquinone,** *p*-nitro- (Laubé and König), 1909, A., i, 55.

**Phenylenebisdiacetonitriles,** *o*-, *m*-, and *p*- (v. Meyer and Schumacher), 1908, A., i, 910.

*p*-**Phenylenebis-1:3-diphenyl-4:5-dihydropyrazole** (v. Lendenfeld), 1907, A., i, 221.

*p*-**Phenylenebis-2:3:7-*tri*hydroxyfluorone** and its sulphate and acetyl derivative (Heintschel), 1905, A., i, 809.

*p*-**Phenylenebisiminocamphor** (Forster and Thornley), 1909, T., 955.

*m*-**Phenylenebis-2:5-imino-1-phenyl-2:3-dimethylpyrazole** and its salts (Michaelis, Wurl, and Doepmann), 1911, A., i, 1042.

**3:3′-Phenylenebis-2-methyl-3:4-dihydro-4-quinazolone** (Bogert, Gortner, and Amend), 1911, A., i, 581.

*p*-**Phenylenebismethylsulphone** (Tröger and Meine), 1904, A., i, 31.

**3:3′-*m*-Phenylenebis-2-*m*-nitrophenyl-3:4-dihydro-4-quinazolone** (Bogert, Gortner, and Amend), 1911, A., i, 582.

*m*-**Phenylenebis-sulphone-acetic, -propionic, and -butyric acids** and their esters (Tröger and Meine), 1904, A., i, 30.

*o*-**Phenylenecarbamide,** *p*-chloro- (Fischer and Limmer), 1906, A., i, 895.

*m*-**Phenylenecarbamide,** preparation of (Kalle & Co.), 1904, A., i, 346.

*o*-**Phenylenediacetic acid** and its amide and nitrile, preparation of (Moore and Thorpe), 1908, T., 175.

*o*-**Phenylenediamine,** oxidation of (Ullmann and Mauthner), 1903, A., i, 199.
  oxidation of, and its compound with silver nitrate (Willstätter and Pfannenstiel), 1905, A., i, 723.
  substituted, oxidation of (Ullmann and Mauthner), 1904, A., i, 192; (Fischer), 1904, A., i, 349.
  condensation of, with phthalonic acid (Manuelli and Silvestri), 1904, A., i, 784.
  condensation of, with phthalonimide (Gabriel), 1905, A., i, 97.

*o*-**Phenylenediamine,** 4:6-*di*bromo-, and its salts and diacetyl derivative (Jackson and Russe), 1906, A., i, 307.
  3:4:5-*tri*bromo- (Jackson and Fiske), 1903, A., i, 690.
  4-chloro-, and its *N*-diacetyl derivatives (Ullmann and Mauthner), 1904, A., i, 192.
  *p*-chloro-, dibenzoyl derivative of, and *p*-chloronitro-, diacetyl and dibenzoyl derivatives of (Fischer and Limmer), 1906, A., i, 895.
  *p*-*di*chloro- (Noelting and Kopp), 1905, A., i, 873.
  2:4:5-*tri*chloro-, acetyl, formyl, and benzoyl derivatives of, and *tetra*chloro-, acetyl derivative of (Badische Anilin- & Soda-Fabrik), 1907, A., i, 444.
  3-nitro- (Borsche and Rantscheff), 1911, A., i, 330.

*m*-**Phenylenediamine** and nitroso-, and their condensation products with benzaldehyde, and 1-nitro- (Bertels), 1904, A., i, 620.
  condensation of, with methyldihydroresorcinol (Haas), 1906, T., 577.
  black sulphur dye from (Kalle & Co.), 1904, A., i, 607.
  monoacyl derivatives, action of nitrous acid on (Morgan and Micklethwait), 1906, T., 1292.
  symmetrically disubstituted, azo-derivatives of (Morgan and Wootton), 1905, T., 937; P., 179.
  reactions of, with gold salts (Siemssen), 1912, A., ii, 1001.
*m*-**Phenylenediamine,** 4-amino-, *N*-(4)-acetyl derivative of (Farbenfabriken vorm. F. Bayer & Co.), 1907, A., i, 977.
    action of carbonyl chloride on (Cassella & Co.), 1906, A., i, 712.
  1-bromo-2:4:6-*tri*-iodo-, and its hydrochloride (Jackson and Bigelow), 1912, A., i, 102.
  6-bromo-4-nitro-, and 6-chloro-4-nitro-, and their diacetyl derivatives, and 2:6-*di*bromo-4-nitro-, and *di*-iodo- (Morgan and Wootton), 1905, T., 938; P., 179.
  2:4-*di*bromo-6-nitro- (Jackson and Fiske), 1903, A., i, 690.
  2-chloro-, dibenzoyl derivative (Borsche and Rantscheff), 1911, A., i, 330.
  *N*-cyano-, acetyl derivative (Pierron), 1908, A., i, 926.
  4-nitro- (Aktien-Gesellschaft für Anilin-Fabrikation), 1903, A., i, 54.
  5-nitro-, and its diacetyl derivative (Flürscheim), 1905, A., i, 615.
  2:4-*di*nitro- (Körner and Contardi), 1908, A., i, 524.
  4:6-*di*nitro- (Reitzenstein and Rothschild), 1906, A., i, 455; (Zincke and Weisspfenning), 1912, A., i, 302.
  2:4:6-*tri*nitro- (Blanksma), 1903, A., i, 158.
    diacetyl derivative (Blanksma), 1909, A., i, 780.
*p*-**Phenylenediamine,** preparation of (Aktien-Gesellschaft für Anilin-Fabrikation), 1909, A., i, 256.
  oxidation of (Bamberger and Hübner), 1904, A., i, 118; (Erdmann), 1904, A., i, 778, 935.
  new base from (Paul), 1904, A., i, 530.
*p*-**Phenylenediamine,** condensation of, with aldehydes and ketones (Rothenfusser), 1908, A., i, 52.
  sulphurous acid compound of (Société Anonyme des Plaques et Papiers Photographiques, A. Lumière et ses Fils), 1908, A., i, 977.
  monoacyl derivatives, action of nitrous acid on (Morgan and Micklethwait), 1905, T., 930; P., 179.
  benzoyl derivative, diazo-derivatives of (Morgan and Wootton), 1907, T., 1315.
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  nitrates (Schall), 1908, A., i, 289.
  zincichloride (Reddelien), 1910, A., i, 747.
*p*-**Phenylenediamine,** 2:5-*di*bromo-, and its hydrochloride (Jackson and Calhane), 1903, A., i, 159.
  2:6-*di*bromo-, preparation of (Hewitt and Walker), 1907, T., 1141; P., 161.
  2-chloro-, 1-acetyl derivative (Cain), 1909, T., 716; P., 123.
  *di*chloro-, *N*-diacetyl derivative of (Noelting and Kopp), 1905, A., i, 873.
  hydroxy-, and its unsymmetrical dialkyl derivatives, oxidation of (Kehrmann and Poplawski), 1909, A., i, 516.
  3-nitro-1:4-*di*-*p*-nitro-, and 2:3-*di*-nitro-1:4-*di*-*p*-nitro-, benzoyl derivatives (Kym and Kowarski), 1911, A., i, 1044.
**Phenylenediamines,** action of pyrocinchonic anhydride on (Rossi), 1904, A., i, 1046.
  diazo-derivatives of (Vignon), 1906, A., i, 223.
  *o*-, *m*-, and *p*-, interaction of, with malonic, succinic, and isosuccinic acids (Meyer), 1903, A., i, 442.
    interaction of, with phthalic and succinic anhydrides (Meyer), 1903, A., i, 443.
  *m*- and *p*-, condensation of, with dimethyldihydroresorcin and with chloroketodimethyltetrahydrobenzene (Haas), 1906, T., 387; P., 63.
*p*-**Phenylenediaminearsinic acid.** See Phenylarsinic acid, 2:5-*di*amino-.
*p*-**Phenylenediamine-di-** and **-tetra-thiosulphonic acids** and their reactions (Green and Perkin), 1903, T., 1201; P., 206.

*m*-**Phenylenediaminesulphonic acid**, nitro-, azo-dyes from (Badische Anilin- & Soda-Fabrik), 1906, A., i, 322.

*p*-**Phenylenediaminesulphonic acid**, preparation of (Aktien-Gesellschaft für Anilin-Fabrikation), 1909, A., i, 256, 257.

**1:4-Phenylenediamine-2-thiolacetic acid**, 5-chloro-, sodium salt (Kalle & Co.), 1909, A., i, 736.

*o*-, *m*-, and *p*-**Phenylenediammonium** platinibromide (Gutbier, Bauriedel, and Obermaier), 1911, A., i, 33.

*p*-**Phenylenedianthranilic acid** (Ullmann and Maag), 1906, A., i, 459.

**1:2-Phenylenediazo-oxide**, 4-chloro-5-nitro- (Farbenfabriken vorm. F. Bayer & Co.), 1908, A., i, 230.

*m*-**Phenylenedicyanamide** (Pierron), 1908, A., i, 925.

*m*-**Phenylene-*s*-diethyldiamine** and **-*s*-diethyldinitroamine**, *tri*nitro- (Blanksma), 1903, A., i, 158.

*m*-**Phenylene-*as*-diethyldiamine**, acetyl derivative (Grandmougin and Lang), 1909, A., i, 971.

*p*-**Phenylenedi-*a*-ethyldiamine.** See *p*-Diethylbenzene, *di*-*a*-amino-.

*p*-**Phenylenediglycine** and its amide and nitrile (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 153.

*p*-**Phenylenedimalonamic acid**, ethyl ester (Meyer and v. Lutzau), 1906, A., i, 765.

**Phenylenedimercury acetate**, hydroxy-, estimation of mercury in (Brieger), 1912, A., ii, 206.

*m*-**Phenylene-*N*-dimethylamine**, 2:4:6-*tri*nitro- (Blanksma), 1903, A., i, 158.

**1:1′-*p*-Phenylene-2:2′-dimethylbisbenziminazole**, 4:4′:7:7′-*tetra*nitro-6:6′-*di*hydroxy-, and its silver salt (Meldola and Kuntzen), 1911, T., 40.

*p*-**Phenylenedimethyldiamine**, 4-bromo- (Fischer and Mouson), 1905, A., i, 246.
  4-chloro-, and its oxidation (Fischer), 1904, A., i, 349.
  *p*-chloronitro-, and its salts (Fischer and Limmer), 1906, A., i, 896.
  3-nitro- (Borsche and Rantscheff), 1911, A., i, 330.

*m*-**Phenylenedimethyldiamine** (m-*aminodimethylaniline*), condensation of, with aromatic aldehydes (Moore), 1910, A., i, 280.
  acetyl derivative (Grandmougin and Lang), 1909, A., i, 972.

*m*-**Phenylenedimethyldiamine**, 2:4-*di*nitro- (Blanksma), 1908, A., i, 158.
  4:6-*di*nitro-2-cyano- and 4:6-*ωω*-*tetra*nitro-2-cyano- (Blanksma), 1908, A., i, 271.

*p*-**Phenylenedimethyldiamine** and its derivatives (Willstätter and Pfannenstiel), 1905, A., i, 669.

*p*-**Phenylene-*as*-dimethyldiamine**, acetyl derivatives (Auwers and Wehr), 1904, A., i, 998.

*p*-**Phenylene-*as*-dimethyldiaminedithiosulphonic acid** (Green and Perkin), 1903, T., 1212.

*p*-**Phenylene-*as*-dimethyldiaminethiosulphonic acid**, action of formaldehyde on (Schmidt), 1906, A., i, 711.

*m*-**Phenylenedimethyldinitroamine**, 4-bromo-2:6-*di*nitro- (Blanksma), 1903, A., i, 333.

**Phenylene-1:4-dimethyldisulphone** (Zincke and Frohneberg), 1909, A., i, 643.

*p*-**Phenylenedi-5-methylpyrazole** (Berend and Herms), 1906, A., i, 854.

**Phenylene-1:2-dioxydiacetic acid** (*catecholbisoxyacetic acid*) and chloride (Bischoff and Fröhlich), 1907, A., i, 697.

**3:3′-*p*-Phenylenedi-1-phenylpyrazolone** (Berend and Herms), 1906, A., i, 854.

**Phenylenediphthalimides**, *o*- and *p*- (Meyer and Jaeger), 1906, A., i, 767.

**Phenylene-*o*-, -*m*-, and -*p*-dipyrocinchonimides** (Rossi), 1904, A., i, 1046.

*p*-**Phenylenediquinoxanthenol** bromide hydrobromide (Cone and West), 1911, A., i, 806.

*m*-**Phenylenedisebacic acid**, ethyl ester (Meyer and Maier), 1906, A., i, 766.

*p*-**Phenylenedi*iso*succinamic acid**, ethyl ester (Meyer and Jaeger), 1906, A., i, 766.

*m*-**Phenylenedisuccinamide** (Meyer and v. Lutzau), 1906, A., i, 766.

*m*-**Phenylenedisulphon-acetonitrile** and **-thioacetamide** (Tröger and Hille), 1905, A., i, 337.

*m*-**Phenylenedisulphondiethenylaminoxime** (Tröger and Volkmer), 1905, A., i, 356.

*p*-**Phenylenedixanthenol** and its salts (Cone and West), 1911, A., i, 805.

*o*-**Phenyleneguanidine** and its benzoyl derivative (Pierron), 1908, A., i, 926.

*o*-**Phenylenemalonamide** (Meyer and v. Lutzau), 1906, A., i, 765.

*o*-**Phenylenemethyldiamine,** 2:4:5-*tri*chloro-, formyl derivative of (Badische Anilin- & Soda-Fabrik), 1907, A., i, 444.

*p*-**Phenylenemethyldiamine** (Willstätter and Pfannenstiel), 1905, A., i, 669.

**2-Phenylene-6-methylpyridineketone.** See 2-*o*-Benzylenone-6-methylpyridine.

*o*-**Phenylene-ββ-naphthylene ketone** and its phenylhydrazone (Thiele and Schneider), 1909, A., i, 929.

**Phenylene-β-naphthylene oxide** (Sabatier and Mailhe), 1912, A., i, 767.

**Phenylene-2:3-naphthylene oxide.** See Brazan.

**Phenylenenaphthylene-sultam** (Ullmann and Gross), 1910, A., i, 886.

**Phenyleneoxamide** (Motylowski), 1908, A., i, 371; (Hinsberg), 1908, A., i, 694.

**Phenylenephthalylcinchonimides,** *m*- and *p*- (Rossi), 1904, A., i, 1047.

**Phenylene-pyrocinchonimides,** *m*- and *p*-amino-, and **-pyrocinchonic diamide** (Rossi), 1904, A., i, 1046.

*o*-**Phenylenesebacamide** (Meyer and Maier), 1906, A., i, 766.

*o*-**Phenylene***iso***succinimide** (Meyer and Jaeger), 1906, A., i, 766.

*o*-**Phenylenesulphonylide** (Anschütz), 1912, A., i, 852.

*m*-**Phenylenetetramethyldiamine,** new derivatives of (Sachs and Appenzeller), 1908, A., i, 227.

*p*-**Phenylenetetramethyldiamine** (Meyer), 1903, A., i, 861.

*o*-**Phenylenethiocarbamide,** *p*-chloro- (Fischer and Limmer), 1906, A., i, 895.

**Phenylethane.** See Ethylbenzene.

**Phenylethanol,** *p*-hydroxy-. See Tyrosol.

**Phenylethanolamine,** *o-di*hydroxy-, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 792.

**Phenylethanol-carbamide** and **-thiocarbamide** (Knorr and Rössler), 1903, A., i, 465.

**Phenylethanolmethylamine,** *o-di*hydroxy-, preparation of crystalline salts of, and hydrochloride of (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 229.

**Phenylethenylamidine** benzenesulphonate (Rouiller), 1912, A., i, 584.

**Phenylethenylamidine,** 2:4:5-*tri*- and *tetra*-chloro- (Badische Anilin- & Soda-Fabrik), 1907, A., i, 444.

**Phenylethenylamino-oxime,** hydroxy- (Conduché), 1908, A., i, 155.

**Phenylethenyl-mono-** and **-di-phenylhydrazidines** (Voswinckel), 1903, A., i, 778.

**Phenyl-ether-*o*-carboxylic acid.** See *o*-Phenoxybenzoic acid.

**Phenylethoxyacetic acid,** affinity constant of (Findlay, Turner, and Owen), 1909, T., 939; P., 146.

*dl*-**Phenylethoxyacetic acid,** *l*-bornyl and *l*-menthyl esters, hydrolysis of, by alkali (McKenzie and Thompson), 1905, T., 1010; P., 184.

**Phenyl β-ethoxyethyl ketone,** 4-bromo-, and its phenylhydrazone (Kohler), 1909, A., i, 939.

**Phenylethoxyglyoxime** *per*oxide (Wieland), 1903, A., i, 770.

**1-Phenyl-3-ethoxymethyl-5-pyrazolone-4-carboxylic acid,** *p*-nitro-, ethyl ester (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 340.

*s*-**Phenylethoxymethylthiocarbamide** (Johnson and Guest), 1909, A., i, 371.

**Phenyl α-ethoxystyryl ketone** (Sluiter), 1905, A., i, 796.

β-**Phenylethyl alcohol.** See Benzylcarbinol.

α-**Phenylethyl** ethyl ether (Holmberg), 1912, A., i, 448.

β-**Phenylethyl** mercaptan (v. Braun), 1912, A., i, 551.

γ-**Phenyl-α-ethylacetoacetic acid,** α-cyano-, ethyl ester, and its hydrolysis, and anilide (Smith and Thorpe), 1907, T., 1905; P., 249.

β-**Phenyl-α-ethylacrylic acid,** methyl ester (Posner), 1911, A., i, 53.

**Phenylethylalkylamines,** *p*-hydroxy-, synthesis of (Walpole), 1910, T., 941; P., 87.

δ-**Phenyl-β-ethylallylmalonamic acid** (Macleod), 1910, A., i, 846.

**Phenylethylamine,** ω-*tri*chlorohydroxy-*m*-cyano- (Bogert and Beans), 1904, A., i, 585.

α-**Phenylethylamine** and its formyl derivative (Wallach), 1906, A., i, 160.

  oxidation of (Bamberger and Seligman), 1903, A., i, 324.

α-**Phenylethylamine,** *p*-hydroxy-, and its hydrochloride and dibenzoyl derivative (Tutin, Caton, and Hann), 1909, T., 2123.

  *d*-camphorsulphonate, and its active forms and their benzoyl derivatives (Moore), 1911, T., 419; P., 42.

*l*-α-**Phenylethylamine** (Kipping and Hunter), 1905, P., 126.

**β-Phenylethylamine** and its auri- and platini-chlorides (Emde), 1911, A., ii, 314.
  salts (Dehn), 1912, A., i, 242.
  picrate (Decker and Kropp), 1909, A., i, 513.
  platinichloride (Decker and Becker), 1912, A., i, 844.

**β-Phenylethylamine**, *p*-amino-, and its derivatives (Johnson and Guest), 1910, A., i, 310.
  dihydrochloride (Ehrlich and Pishtschimuki), 1912, A., i, 853.
  β-hydroxy-, and its hydrochloride (Rosenmund), 1912, A., i, 449.
  *o*-hydroxy-, and its methyl ether, and their hydrochlorides (Pschorr and Einbeck), 1905, A., i, 590.
  *o*-hydroxy-, and *m*-hydroxy-, hydrochloride (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 629.
  *p*-hydroxy-, and its hydriodide and hydrochloride (Rosenmund), 1910, A., i, 106, 241.
    syntheses of (Barger), 1909, T., 1123; P., 162; (Barger and Walpole), 1909, T., 1720; P., 229.
    preparation of (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 437.
    fate of, in the organism (Ewins and Laidlaw), 1910, A., ii, 985.
  β-*p*-*di*hydroxy-, and its hydrochloride and di- and tri-benzoyl derivatives (Tutin, Caton, and Hann), 1909, T., 2120; P., 289.
  3:4-*di*hydroxy-, and its hydrochloride (Rosenmund, Mannich, and Jacobsohn), 1912, A., i, 967.
    preparation of, and its hydrobromide (Barger and Ewins), 1910, T., 2257; P., 248; (Mannich and Jacobsohn), 1910, A., i, 168.
  2:3:4-*tri*hydroxy-, hydrochloride (Barger and Ewins), 1910, T., 2260; P., 248.
  *o*- and *p*-nitro-, and 2:4-*di*nitro-, and their derivatives (Johnson and Guest), 1910, A., i, 310.
  *p*-nitro- and its hydrochloride (Barger and Walpole), 1909, T., 1723.

**Phenylethylamines**, hydroxy-, preparation of (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 629.
  α-3:4-*tri*hydroxy-, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 569.

**α-Phenylethylamines**, optically active, and their derivatives (Marckwald and Meth), 1905, A., i, 273; (Lovén), 1905, A., i, 875.
  salts of (Hunter and Kipping), 1903, T., 1147; P., 203.

**Phenylethylaminoacetonitrile**, *p*-bromo-, and its platinichloride and methiodide (v. Braun), 1908, A., i, 626.

**ω-Phenylethylaminoacetophenone**, semicarbazones (Busch and Hefele), 1911, A., i, 584.

**β-Phenylethylaminomalon-β-phenylethylamide** and its salts (Decker and Becker), 1911, A., i, 714.

**2-Phenylethylamino-5-methyl-4:5-dihydrothiazole** and its platinichloride (Young and Crookes), 1905, P., 308; 1906, T., 70.

*d*- and *l*-**α-Phenylethylamino-*d*-methylenecamphor** (Pope and Read), 1909, T., 172.

**ω-Phenylethylaminomethylisatin** (Einhorn and Göttler), 1910, A., i, 137.

**Phenylethylammonium** methyl sulphate (Johnson and Guest), 1910, A., i, 471.
  platinibromide (Gutbier, Bauriedel, and Obermaier), 1911, A., i, 33.

**Phenylethylbarbituric acid**, compounds of, with quinine and with hydroquinine (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 798.

**5-Phenyl-5-ethylbarbituric acid** and its salts (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1024.

**Phenylethylbenzenylamidine** (Lander), 1903, T., 320; P., 15.

**1-Phenyl-2-ethylbenziminazole**, 4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 2041.

**Phenylethylbromoarsine** (Winmill), 1912, T., 720.

**α-Phenyl-β-ethyl-butaldehyde** and its semicarbazone and **-butane-αβ-diol** (Tiffeneau and Dorlencourt), 1907, A., i, 131.

**α-Phenyl-β-ethylbutanedione.** See Ethylbenzoylacetone.

***p*-Phenylethyl butyl ketone** and its oxime and semicarbazone (Layraud), 1906, A., i, 433.

**α-Phenyl-α-ethylbutyramide** (Bodroux and Taboury), 1910, A., i, 557; (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 974.

**α-Phenyl-α-ethylbutyric acid** (Bodroux), 1910, A., i, 672.

**γ-Phenyl-β-ethylbutyric acid** and its calcium salt (Eykman), 1904, A., i, 590.

γ-**Phenyl-β-ethylbutyrolactone** (Eykman), 1904, A., i, 590.

α-**Phenyl-α-ethylbutyronitrile** (Bodroux and Taboury), 1910, A., i, 482; (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 974.

α-**Phenyl-α-ethylbutyrylcarbamide** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 974.

*s*-**Phenylethylcarbamidoazobenzene** (Dimroth), 1905, A., i, 311.

**Phenylethylcarbinol** (Davies and Kipping), 1911, T., 298.
  hydrogen succinate of (Pickard and Kenyon), 1911, T., 59.

**Phenylethylcarbinol,** *di*bromo- (Schmidt and Goehring), 1909, A., i, 322.

*d*-**Phenylethylcarbinol** and the brucine salt of the hydrogen succinate of (Pickard and Kenyon), 1911, T., 60.

*l*-**Phenylethylcarbinol** and hydrogen succinate of, and its cinchonidine salt (Pickard and Kenyon), 1911, T., 61.

**Phenylethyl***di***chloroacetal** (Oddo and Mameli), 1906, A., i, 135, 620.

**Phenylethylchloroarsine** (Winmill), 1912, T., 720.

**Phenylethyldialkylamines,** hydroxy-, preparation of (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 629.

β-**Phenylethyldiethylamine** and its picrate and platinichloride (v. Braun), 1911, A., i, 35.

**5-Phenyl-10-ethyldihydroacridine,** 5-cyano- (Kaufmann, Albertini, and Holsboer), 1909, A., i, 606.
  5-hydroxy-, and its ethyl ether (Schmid and Decker), 1906, A., i, 306.

**2-Phenyl-1-ethyl-1:2-dihydrocinchonine** (Freund and Mayer), 1910, A., i, 132.

*N*-**Phenyl-α-ethyldihydrophenanthraphenazine** and its hydrochloride and hydrobromide (Freund and Richard), 1909, A., i, 418.

**3-Phenyl-6-ethyldihydropyrazoquinazolone** (Michaelis and Leo), 1910, A., i, 515.

**4-β-Phenylethyldihydro-6-pyridone,** 3:5-*di*cyano-2-hydroxy-, ammonium derivative of (Piccinini), 1904, A., i, 91.

**4-Phenyl-4-ethyldihydrouracil** (Posner and Stirnus), 1912, A., i, 456.

β-**Phenylethyldimethylamine** and its salts (Decker and Becker), 1912, A., i, 844.

β-**Phenylethyldimethylamine,** synthesis of (Barger), 1909, T., 2195; (Johnson and Guest), 1910, A., i, 470.

β-**Phenylethyldimethylamine,** *m*-hydroxy- (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 629.
  *p*-hydroxy-. See Hordenine.

**Phenylethyldimethylthiocarbamide** (v. Braun and Deutsch), 1912, A., i, 693.

**Phenylethyldisulphone-ethane, -methane, -dimethylmethane, and -phenylmethane** (Posner and Hazard), 1903, A., i, 243.

**Phenylethylene.** See **Styrene.**

**Phenylethylenecatechol,** preparation of (Lazennec), 1909, A., i, 469.

**Phenylethylethenylamidine,** 2:4:5-*tri*- and *tetra*-chloro- (Badische Anilin- & Soda-Fabrik), 1907, A., i, 444.

**Phenylethylethoxyethylcarbinol** (Reynolds), 1910, A., i, 858.

α-**Phenylethylethylamine** and its derivatives (Wieland and Fressel), 1911, A., i, 496.

β-**Phenylethylethylamine** and its derivatives (v. Braun), 1911, A., i, 35.

β-**Phenylethylethylamine,** *p*-hydroxy-, and its derivatives (Walpole), 1910, T., 948; P., 88.
  3:4-*di*hydroxy-, and its hydrochloride (Pyman), 1910, T., 274.

β-**Phenylethylethylcyanamide** (v. Braun), 1911, A., i, 35.

β-**Phenyl-β-ethylethylenelactic acid.** See β-Phenylvaleric acid, β-hydroxy-.

β-**Phenyl-β-ethylglycidic acid,** ethyl ester (Claisen), 1905, A., i, 287.

β-**Phenylethylglycine** and its hydrochloride (Decker and Becker), 1911, A., i, 714.

**Phenylethylglycollic acid** and its ethyl ester (Grignard), 1903, A., i, 32.

α-**Phenyl-α-ethylglycollic acid.** See α-Phenylbutyric acid, α-hydroxy-.

α-**Phenyl-ε-ethyl-**$\Delta^{\alpha\gamma}$**-heptadien-ε-ol** (Reynolds), 1911, A., i, 861.

**1-Phenyl-3-ethyl***cyclo***hexadiene** (Blaise and Maire), 1908, A., i, 391.

**4-Phenyl-1-ethyl***cyclo***hexane-2:6-dione-3:5-dicarboxylic acid,** ethyl ester (Dieckmann and Kron), 1908, A., i, 389.

**1-Phenyl-4-ethylhydantoin,** 2-thio- (Brautlecht), 1911, A., i, 922.

β-**Phenyl-β-ethylhydracrylic acid** (Schroeter), 1907, A., i, 531.

*s*-**Phenylethylhydrazine** (Tichwinsky), 1905, A., i, 93.
  and its oxalate (Knorr), 1906 A., i, 893.

*s*-**Phenylethylhydrazine**, hydrochloride and benzoyl derivative of (Knorr and Weidel), 1909, A., i, 966.

*as*-**Phenylethylhydrazine** and its benzoyl derivative (Bamberger and Tichwinsky), 1903, A., i, 131; (Tichwinsky), 1903, A., i, 442.

**Phenylethylhydrazinopyrine** and its alkyliodides (Michaelis and Kobert), 1909, A., i, 680.

**1-α-Phenylethylideneamino-1:3:4-triazole** (Bülow), 1909, A., i, 680.

**Phenylethylidene-*p*-benzoquinone**, bromo-derivatives (Zincke and Geibel), 1906, A., i, 740.

**β-Phenylethylidenebishydrazobenzene** (Rassow and Burmeister), 1911, A., i, 820.

**Phenylethylidenedeoxybenzoin** (Ruhemann), 1910, T., 459.

**Phenylethylidenehydrazine.** See Acetaldehydephenylhydrazone.

**Phenylethylidenephosphamic chloride**, α-chloro-β-bromo- (Steinkopf and Benedek), 1908, A., i, 963.

α-**Phenylethylidenetriazoacetohydrazide** (Curtius and Bockmühl), 1912, A., i, 426.

**3-Phenyl-2-ethyl*iso*indolinone**, 3-hydroxy- (Sachs and Ludwig), 1904, A., i, 267.

**2-Phenyl-3-ethyl*iso*indolinone**, 3-hydroxy- (Béis), 1906, A., i, 884.

**Phenyl ethyl ketone.** See Propiophenone.

**β-Phenyl-β-ethyl-lactic acid.** See β-Phenylbutyric acid, β-hydroxy-.

**β-Phenylethylmalonamic acid** (Kohler and Reimer), 1905, A., i, 348.

**Phenylethylmalonic acid** and its chloride (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1025.
  ethyl ester (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1024.

**β-Phenylethylmalonic acid** and its ethyl ester (Kohler), 1905, A., i, 701.

γ-**Phenylethylmalonic acid** and its ethyl ester and α-bromo- (Fischer and Schmitz), 1906, A., i, 182, 584.

**β-Phenylethylmethylamine** and its salts (Decker and Becker), 1912, A., i, 845.
  synthesis of, and its salts (Johnson and Guest), 1909, A., i, 784.

**β-Phenylethylmethylamine**, *p*-hydroxy-, and its derivatives (Walpole), 1910, T., 945; P., 88.
  3:4-*di*hydroxy- and its salts (Pyman), 1910, T., 272.
  α-3:4-*tri*hydroxy-, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 792.

**β-Phenylethylmethylamine**, *p*-nitro-, and its hydrobromide (Johnson and Guest), 1910, A., i, 471.

α-**Phenylethyl-methyl-** and **-ethylamines** and their hydrochlorides (Busch and Leefhelm), 1908, A., i, 153.

**1-Phenyl-2-ethyl-3-methylbenziminazolium**, 4:7-*di*nitro-6-hydroxy-, iodide and chloride (Meldola and Kuntzen), 1911, T., 2041.

α-**Phenylethyl-α-methylcarbamide** (Johnson and Guest), 1909, A., i, 785.

**β-Phenylethylmethylcyanamide** (v. Braun), 1911, A., i, 35.

**Phenylethyl methyl ether** (Hamonet), 1904, A., i, 401.

**β-Phenylethyl methyl ketone**, 4-bromo- and 4-chloro-2-nitro-β-hydroxy- (Sachs and Sichel), 1904, A., i, 594.

**1-α-Phenylethyl-5-methyl-1:2:4-triazole**, 3-hydroxy- (Rupe and Oestreicher), 1912, A., i, 220.

α-**Phenylethyl-β-1-naphthylcarbamide** (Johnson and Guest), 1909, A., i, 785.

α-**Phenylethyl-β-2-naphthyl-α-methylcarbamide** (Johnson and Guest), 1909, A., i, 785.

**5-Phenyl-3-ethyl*iso*oxazole** (Moureu and Brachin), 1904, A., i, 96.

**Phenylethyl*iso*oxazolone** (Haller and Bauer), 1911, A., i, 568.

**3-Phenyl-1-ethyl*cyclo*-pentadiene** and **-pentane** (Borsche and Menz), 1908, A., i, 149.

γ-**Phenyl-γ-ethylpentane** (Schreiner), 1910, A., i, 661.

δ-**Phenyl-β-ethyl-Δγ-pentenoamide** (Macleod), 1910, A., i, 846.

δ-**Phenyl-β-ethyl-Δγ-pentenoic acid**, α-cyano-, and its potassium salt and ethyl ester (Macleod), 1910, A., i, 846.

**β-Phenylethylphenylcyanamide** (v. Braun), 1911, A., i, 35.

**Phenyl-*p*-ethylphenylhydrazine**, *op-di*nitro- (Willgerodt and Harter), 1905, A., i, 552.

**Phenylethylphenylmethylsuccinic acid**, synthesis of (Eykman), 1905, A., i, 529.

α-**Phenylethylphenylthiocarbamide**, α-hydroxy- (Kolshorn), 1904, A., i, 676.

**Phenylethylphosphinic acid**, and its ethyl ester (Arbusoff), 1910, A., i, 803.

**Phenylethylpiperidinium bromide** (v. Braun), 1908, A., i, 678.

**1-β-Phenylethyl*cyclo*propane-2-carboxylic acid**, amide of (v. der Heide), 1904, A., i, 583.

**β-Phenyl-α-ethylpropionhydroxamoxime hydrate**, β-hydroxylamino- (Posner and Stirnus), 1912, A., i, 456.

**β-Phenyl-α-ethylpropionic acid**, resolution of, and *d*-, and its *l*-menthylamine, and metallic salts of (Pickard and Yates), 1909, T., 1018 ; P., 152.

  phenylethylamides of (Mohr), 1905, A., i, 428.

**β-Phenyl-α-ethylpropionic acid**, β-amino- (Posner and Stirnus), 1912, A., i, 456.

  β-bromo- (Fichter and Alber), 1907, A., i, 86.

**β-Phenyl-α-ethylpropiophenone** and its oxime (Haller and Bauer), 1910, A., i, 490.

**Phenylethyl-*n*-propylallylarsonium bromide** and *d*-α-bromo-camphor-π-sulphonate (Winmill), 1912, T., 722 ; P., 93.

**Phenylethylpropylamine**, 3:4-*di*hydroxy- and its hydrochloride (Pyman), 1910, T., 275.

**α-Phenylethyl*iso*propylamine** and its salts and derivatives (de Leeuw), 1912, A., i, 24.

**Phenylethyl-*n*-propylarsine** (Winmill), 1912, T., 720.

**Phenylethyl*iso*propylcarbinol** and its chloride (Klages and Haen), 1904, A., i, 497.

**Phenylethylpropylsilicol** and its chloride, preparation of (Kipping), 1907, T., 218.

**5-Phenyl-3-ethylpyrazole** and its picrate (Moureu and Brachin), 1904, A., i, 824.

**1-Phenyl-4-ethyl-pyrazole**, 3:5-*di*chloro-, **-3:5-pyrazolidone** and its dibenzoyl and dibenzenesulphonyl derivatives, and **-5-pyrazolone**, 3-chloro- (Michaelis and Schenk), 1909, A., i, 59.

**1-Phenyl-4-ethyl-5-pyrazolidone** and **-5-pyrazolone** (Blaise and Luttringer), 1905, A., i, 627.

**5-Phenyl-2-ethyl-3-pyrazolidone**, 1-nitroso- (Muckermann), 1911, A., i, 683.

**1-Phenyl-3-ethylpyrazoline** (Maire), 1908, A., i, 291.

**1-Phenyl-3-ethyl-5-pyrazolone-4-phenylhydrazone** (Wahl and Doll), 1912, A., i, 536.

**2-β-Phenylethylpyridine**, β-hydroxy- (*phenyl-α-picolylalkine*), resolution of, into its optically active components (Löffler and Grunert), 1907, A., i, 441.

**4-Phenylethylpyridine** and its **-3-carboxylic acid** and their additive salts (Fels), 1904, A., i, 618.

**2-β-Phenylethylquinoline**, 5-, 6-, and 8-amino-, and their additive salts (Schmidt), 1906, A., i, 39.

  β-hydroxy-, and its salts (Benrath), 1906, A., i, 535.

**4-Phenyl-2-ethylquinoline**, 7-hydroxy- (Bülow and Issler), 1904, A., i, 191.

**3-β-Phenylethylrhodanine** (Holmberg), 1912, A., i, 131.

**α-Phenylethylsemicarbazide** and its derivatives (Rupe and Oestreicher), 1912, A., i, 220.

**2-Phenyl-4-ethylsemicarbazide** and its **1-*di*thiocarboxylic acid**, methyl ester (Busch and Frey), 1903, A., i, 538.

**Phenylethylsilicanediol** (Robison and Kipping), 1912, T., 2158 ; P., 245.

**Phenylethyl-silicon** *di*chloride and **-silicone**, preparation of (Kipping), 1907, T., 215.

**Phenylethylsulphone**, *p*-iodo-, *p*-iodoso-, and *p*-iodoxy-, and their derivatives (Willgerodt and Klinger), 1912, A., i, 256.

**Phenylethylthiobenzamide** (Russell), 1910, T., 957.

**Phenylethyl*di*thiobiuret** (Fromm and Baumhauer), 1908, A., i, 702.

**Phenylethyl-ψ-*di*thiobiurets** (Johnson and Bristol), 1903, A., i, 751.

**Phenylethylthiolcarbamic acid**, phenyl ester (Rivier), 1907, A., i, 838.

**1-Phenyl-4-ethylthiosemicarbazinoacetic acid** and its ethyl ester (Busch and Meussdörffer), 1907, A., i, 449.

**β-Phenylethyl*di*thiourethane** (v. Braun), 1912, A., i, 551.

**Phenylethylthiuret**, action of aromatic amines and hydrazines on (Fromm and Baumhauer), 1908, A., i, 702.

**Phenylethyl-*o*- and -*p*-toluidines**, 2:4-*di*nitro- (Reitzenstein), 1903, A., i, 816.

**Phenylethyltriazen** and its metallic and acetyl derivatives (Dimroth), 1905, A., i, 311, 618.

**1-α-Phenylethyl-1:2:4-triazole**, 3-hydroxy- (Rupe and Oestreicher), 1912, A., i, 220.

**β-Phenylethyltrimethylammonium salts** (Emde), 1911, A., ii, 314 ; (Decker and Becker), 1912, A., i, 844.

  bromide (v. Braun), 1911, A., i, 35.

  chloride, reduction of, with sodium amalgam (Emde), 1912, A., i, 250.

    3:4-*di*hydroxy- (Barger and Ewins), 1910, T., 2258.

*β*-**Phenylethyltrimethylammonium** iodide (JOHNSON and GUEST), 1909, A., i, 785.
  hydroxy- (PSCHORR and EINBECK), 1905, A., i, 590.
  *p*-nitro- (JOHNSON and GUEST), 1910, A., i, 471.
**Phenylethyluramil** (MÖHLAU and LITTER), 1906, A., i, 612.
**1-Phenyl-2-ethylurazole** and its silver salt (BRUNEL and ACREE), 1910, A., i, 521.
*α*-**Phenyl-*β*-ethylvaleric acid** (*phenyldiethylcarbinylacetic acid*) (FARBENFABRIKEN VORM. F. BAYER & CO.), 1912, A., i, 974.
**Phenyleuxanthenol** dimethyl ether. See 2:8-Dimethoxy-9-phenylxanthen-9-ol.
*tert.*-**Phenylfenchol** (LEROIDE), 1909, A., i, 596.
**9-Phenylfluorene** and its benzoyl derivative (WERNER and GROB), 1904, A., i, 865.
  and the corresponding carbinol, amino-derivatives of (ULLMANN and V. WURSTEMBERGER), 1904, A., i, 154; (GUYOT and GRANDERYE), 1905, A., i, 248.
  and 9-bromo-, 9-chloro-, 2-nitro-, and *tetra*nitro- (KLIEGL), 1905, A., i, 187.
**9-Phenylfluorene-9-carboxylic acid**, *p*-hydroxy-, and lactone of *o*-hydroxy- (BISTRZYCKI and V. WEBER), 1910, A., i, 743.
**Phenylfluorenol** and its acetate and methyl and ethyl ethers (KLIEGL), 1905, A., i, 187.
*γ*-**Phenyl-*α*-fluorenylparaconic acid** (STOBBE, BADENHAUSEN, HENNICKE, and WAHL), 1911, A., i, 381.
**9-Phenylfluorone** (POPE and HOWARD), 1911, T., 548; P., 53.
  and amino-, *N*-acetyl derivative of, and hydroxy- (KEHRMANN and DENGLER), 1908, A., i, 1002.
  *m*-bromo-, *m*-nitro-2:3:7-*tri*hydroxy-, and 5′-nitro-2:3:7:2′-*tetra*hydroxy-, and their sulphates and acetyl derivatives (HEINTSCHEL), 1905, A., i, 809.
  *tetra*bromo-3-hydroxy- (POPE and HOWARD), 1910, T., 82.
  3-hydroxy- (POPE and HOWARD), 1910, T., 1026.
  2:3:7-*tri*hydroxy-, and its salts, and triacetyl derivative (LIEBERMANN, LINDENBAUM, and GLAWE), 1904, A., i, 443.
**9-Phenylfluorone**, 2:3:7-*tri*hydroxy-, ethers of (KEHRMANN and GÜNTHER), 1912, A., i, 1012.
  2:3:7-*o*- and 2:3:7-*p*-*tetra*- and 2:3:7-*mp*-*penta*-hydroxy-, and their sulphates and acetyl derivatives (LIEBERMANN and LINDENBAUM), 1904, A., i, 765.
**Phenylfluoryl** *per*oxide (GOMBERG and CONE), 1906, A., i, 822; (STAUDINGER), 1906, A., i, 824.
**Phenylformol**, preparation of (NASTUKOFF), 1904, A., i, 242.
**Phenylformylaminomethylcarbinol** (PICTET and GAMS), 1910, A., i, 774.
**Phenylfumaric diamide**, *p*-hydroxy- (PIUTTI), 1910, A., i, 23.
**Phenylfurazan**, hydroxy- (WIELAND and SEMPER), 1908, A., i, 109.
**1-Phenyl-4-furfurylidenehydantoin**, 2-thio- (WHEELER and BRAUTLECHT), 1911, A., i, 501.
**2-Phenyl-4-furfurylideneoxazolone** (ERLENMEYER and STADLIN), 1905, A., i, 238.
**1-Phenyl-5-furyl-3-methylpyrazoline** (AUWERS and VOSS), 1910, A., i, 71.
**1-Phenyl-3-furyl-2-methyl-5-*iso*pyrazolone**, 4-nitroso-, and its hydrochloride (TORREY and ZANETTI), 1910, A., i, 893.
**Phenylfuryl-1:3:4-oxadiazole** and its silver nitrate compound (STOLLÉ and MÜNCH), 1905, A., i, 95.
*α*-**Phenyl-*γ*-2-furylpropane** (*tetrahydrocarlina oxide*) (SEMMLER), 1906, A., i, 298.
*α*-**Phenyl-*γ*-2-furylpropane-*αγ*-dione** and its oxime, dioxime, and diacetate (SEMMLER and ASCHER), 1909, A., i, 597.
*α*-**Phenyl-*γ*-2-furylpropan-*α*-ol** and its ethyl ether, acetate, chloride, and phenylurethane (SEMMLER and ASCHER), 1909, A., i, 597.
*α*-**Phenyl-*γ*-2-furyl-$\Delta^{\alpha}$-propene** (*dihydrocarlina oxide*) (SEMMLER and ASCHER), 1909, A., i, 597.
**1-Phenyl-3-furyl-5-pyrazolone**, acetyl, benzoyl, and nitroso-derivatives of (TORREY and ZANETTI), 1907, A., i, 147.
  hydrochloride, and *p*-bromo-, *m*-nitro-, and 4-oximino- (TORREY and ZANETTI), 1910, A., i, 893.
**2-Phenyl-3-furyl-4-*iso*pyrazolone** (TORREY and ZANETTI), 1910, A., i, 893.
**Phenylgallacetophenone** (*trihydroxydeoxybenzoin*) and its oxime and isonitroso-derivatives (NOELTING and KADIERA), 1906, A., i, 593.

α-**Phenylgeraniol** (Farbenfabriken vorm. F. Bayer & Co.), 1904, A., i, 842; (Austerweil and Cochin), 1910, A., i, 687.
*d*-**Phenylglucosazone**, melting point of (Tutin), 1907, P., 250.
β-**Phenylglutaconic acid** and its barium and calcium salts, semianilide, semi-*p*-toluidide, anil and *p*-tolil (Feist and Pomme), 1910, A., i, 39.
derivatives of (Bland and Thorpe), 1912, T., 868; P., 49.
**Phenylglutaconimide**, cyano-. See 4-Phenyl-$\Delta^{3:6}$-dihydropyridone, cyano-6-hydroxy-.
β-**Phenylglutaric acid**, nitro-derivatives, and their isomerides (Schroeter and Meerwein), 1903, A., i, 831.
β-**Phenylglutaric acid**, *m*-amino-, and *p*-hydroxy- (Kötz), 1907, A., i, 708.
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  *di*bromo-, preparation of (Aktien-Gesellschaft für Anilin-Fabrikation), 1910, A., i, 257; (Badische Anilin- & Soda-Fabrik), 1910, A., i, 382.
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  *o*-nitrophenylhydrazone and its silver and potassium salts (Gastaldi), 1912, A., i, 700.
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δ-**Phenyl-$\Delta^{\gamma}$-heptene** and its nitrosochloride (Murat and Amouroux), 1912, A., i, 528.
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- **Phenyl hexahydrostyryl ketone** (Frézouls), 1912, A., i, 629.
- **ζ-Phenylhexaldehyde** (v. Braun and Kruber), 1912, A., i, 267.
- **2-Phenyl*cyclo*hexamethyleneimine** and its salts, nitrosoamine, and 1-benzenesulphonyl derivative (Gabriel), 1909, A., i, 494.
- **α-Phenylhexane**, ε-bromo- (v. Braun, Deutsch, and Schmatloch), 1912, A., i, 434.
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- **Phenyl*cyclo*hexane**, 1-amino-, and its salts and nitro-derivatives (Kursanoff), 1907, A., i, 599.
  - 1:1-*di*-*p*-hydroxy- (Schmidlin and Lang), 1910, A., i, 837.
- **1-Phenyl*cyclo*hexane-3:4-pyrazolone-5-acetic acid**, methyl ester (Meerwein), 1908, A., i, 546.
- **1-Phenyl*cyclo*hexan-1-ol** (Kursanoff), 1907, A., i, 600.
- **δ-Phenylhexan-β-one** and its oxime (Kohler), 1907, A., i, 1051.
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- **1-Phenyl*cyclo*hexan-3-one-5-acetic acid** and its methyl ester, salts, and phenylhydrazone (Meerwein), 1908, A., i, 546.
- **1-Phenyl*cyclo*hexan-3-one-4-carboxylic-5-acetic acid**, methyl ester and its phenylhydrazone (Meerwein), 1908, A., i, 546.
- **α-Phenyl-$\Delta^{\beta}$-hexene** and its optical behaviour (Klages), 1907, A., i, 500.
- **α-Phenyl-$\Delta^{1}$-*cyclo*hexene-1-acetonitrile** (Harding and Haworth), 1910, T., 497.
- **β-Phenyl-$\Delta^{\gamma}$-hexenoic acid**, β-hydroxy-, methyl ester (Kohler and Heritage), 1910, A., i, 484.
- **ε-Phenyl-$\Delta^{\delta}$-hexenoic acid**, β-iodo-γ-hydroxy- and β-iodo-*αγ*-*di*hydroxy-, lactones of (Bougault), 1908, A., i, 538.
- **5-Phenyl-$\Delta^{2}$-*cyclo*hexenone**, 3:4-diaryl derivatives, and their oximes (Garner), 1904, A., i, 253.
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- **α-Phenyl-$\Delta^{\alpha}$-hexinen-γ-ol** (Brachin), 1907, A., i, 129.
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- **ε-Phenylhexoic acid** and its ethyl ester (v. Braun, Deutsch, and Kruber), 1911, A., i, 969.
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- **ζ-Phenylhexyl** nitrite (v. Braun and Kruber), 1912, A., i, 266.
- **ζ-Phenylhexylamine** and its derivatives (v. Braun, Deutsch, and Kruber), 1911, A., i, 969.
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- **Phenylhistidine**, 2:4-*di*nitro- (Abderhalden and Blumberg), 1910, A., i, 371.
- **Phenylhomocampholic acid**, hydroxy-, and its semicarbazone, formation of (Haller and Weimann), 1907, A., i, 278.

- **Phenylhomosalicylaldoxime** (Plancher and Piccinini), 1905, A., i, 705.
- **Phenylhomosalicylic acid,** hydroxy- (Clemmensen and Heitman), 1911, A., i, 543.
- **γ-Phenylhydantoic acid,** its ethyl ester, and the action of sodium ethoxide on the ester (Bailey), 1903, A., i, 129.
- **3-Phenylhydantoin** and its bromo-, chloro-, and γ-alkyl compounds and the bromo-derivatives of the alkyl compounds (Frerichs and Breustedt), 1903, A., i, 16.
- **3-Phenylhydantoin,** 2-thio- (Wheeler and Brautlecht), 1911, A., i, 501.
- **4-Phenylhydantoin,** action of bromine on, and its 4-amino- and methyl derivatives (Gabriel), 1907, A., i, 90.
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- **1-Phenylhydantoin-4-acetic acid,** 2-thio- (Brautlecht), 1911, A., i, 923.
- **1-Phenylhydantoin-4-glyoxylic acid,** 2-thio- (Johnson and Brautlecht), 1911, A., i, 814.
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- **Phenylhydrazideoximecarboxylic acid** and its benzoyl derivative (Wieland and Gmelin), 1909, A., i, 611.
- **Phenylhydrazidimethylmalonic acid** and bromo-, methyl esters (Perkin), 1903, T., 1225.
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  - *o*-cyano-, and its salts and acyl derivatives (Gabriel), 1903, A., i, 445.
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  - 2:6-*di*nitro-, and its hydrochloride (Borsche and Rantscheff), 1911, A., i, 331.
  - nitroso-, constitution of (Thiele and Sieglitz), 1910, A., i, 777.
    - preparation, properties and copper derivative of (Bamberger and Hauser), 1910, A., i, 776.
- **Phenylhydrazines**, reduction of azobenzenes to, by ethyl alcohol (Ponzio), 1909, A., i, 852.
  - α-acylated, preparation of (Widmann), 1910, A., i, 777.
  - α-benzoylated, preparation of (Lockemann), 1910, A., i, 636.
  - iodo- (Fichter and Philipp), 1907, A., i, 83.
- **4-Phenylhydrazine-2:6-dimethylnicotinic acid** and anhydride and its methyl derivative (Michaelis and v. Arend), 1903, A., i, 292.
- **Phenylhydrazineketo-**. See Ketophenylhydrazine-.
- **Phenylhydrazine-*o*-sulphonic acid**, *p*-nitro-, and its sodium salt (Green and Rowe), 1912, T., 2448.
- **Phenylhydrazinoacetic acids**, *s*- and *as*-, and their derivatives (Busch, Schneider, and Walter), 1904, A., i, 97.
- **Phenylhydrazinoacetic acids**, *s*- and *as*-, *p*-bromo- (Busch and Meussdörffer), 1907, A., i, 348.
- *s*-β-**Phenylhydrazinobutyric acid** (Prentice), 1904, T., 1667 ; P., 220.
- β-**Phenylhydrazino**-β-**cinnamenylpropionic acid**, phenylhydrazine salt and its dibromide (Riedel and Schulz), 1909, A., i, 582.
- **4-Phenylhydrazinocoumarin** (*benzotetronic acid phenylhydrazide*) (Anschütz, Anspach, Fresenius, and Claus), 1909, A., i, 662.
- **4-Phenylhydrazinocoumarin-3-carboxylic acid**, ethyl ester, and phenylhydrazide (Anschütz, Anspach, Fresenius, and Claus), 1909, A., i, 662.

**Phenylhydrazinodicarboxytricarballylic acid**, methyl ester (Ruhemann), 1907, T., 1363; P., 195.
**2-Phenylhydrazinodiethylbarbituric acid.** See Diethylmalonylphenylaminoguanidine.
**4-Phenylhydrazino-1:3-dimethyl-$\Delta^1$-*cyclo*hexen-3-ol-6-one**, and its picrate and oxalate (Bamberger and Reber), 1907, A., i, 644.
**4-Phenylhydrazino-2:6-dimethylnicotinic acid**, ethyl ester, methiodide (Michaelis and Krietemeyer), 1909, A., i, 531.
**ε-Phenylhydrazino-βδ-*di*hydroxy-αγ-diphenylpentane**, ε-imino- and derivatives (Späth), 1912, A., i, 979.
**3-Phenylhydrazino-2-methyldihydroquinazolone**, 5-nitro-, phenylhydrazone of (Bogert and Seil), 1906, A., i, 713.
**Phenylhydrazino-oxalic hydrazide** and its acetyl and benzylidene derivatives (Bülow), 1904, A., i, 689.
**Phenylhydrazino-oximino*iso*oxazolone** (Wieland and Gmelin), 1909, A., i, 611.
**β-Phenylhydrazino-β-phenyl-α-lactic acids** and anhydrides, isomeric (Erlenmeyer and Barkow), 1906, A., i, 237.
**5-Phenylhydrazino-1-phenyl-1:2:4-triazole**, 3-thiol- (Fromm and Baumhauer), 1908, A., i, 702.
**Phenylhydrazinopyrine** and its salts and methiodide (Michaelis and Kobert), 1909, A., i, 680.
**Phenylhydrazodicarbonamide** (Pellizzari and Accame), 1911, A., i, 336.
**4-Phenylhydrazo-1:3-diphenyl-5-pyrazolone** (Wahl), 1907, A., i, 362.
**Phenylhydrazoformaldoxime**, *o-mono-* and *p-ω-di*-chloro- (Busch and Wolbring), 1905, A., i, 494.
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  *di*nitro-, $C_{25}H_{22}O_9N_8$, from *p*-aminobenzeneazosalicylic acid diazochloride (Bülow and Haas), 1911, A., i, 339.
**Phenylhydrazones**, phototropy of certain (Padoa), 1909, A., i, 676.
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  conversion of, into oximes (Fulda), 1903, A., i, 199.
**Phenylhydrazones** of acylated *o*-hydroxyaldehydes, migration of acid residues in the (Auwers and Hannemann), 1909, A., i, 439.
  of unsaturated aldehydes and ketones, transformation of, into pyrazolines (Auwers and Müller), 1909, A., i, 59.
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  of unsaturated compounds, influence of constitution on the conversion of, into pyrazolines (Auwers and Voss), 1910, A., i, 70.
**Phenylhydrazonecyanoacetic acid**, ethyl ester, and its acetyl derivatives (Weissbach), 1903, A., i, 541.
  α- and β-modifications of (Hantzsch and Thompson), 1905, A., i, 615.
**Phenylhydrazonemesoxalic acid** and *p*-bromo-, ethyl esters (Hantzsch and Thompson), 1905, A., i, 615.
**Phenylhydrazonemesoxalylbishydrazonebenzeneazoacetoacetic acid**, ethyl ester (Bülow), 1908, A., i, 254.
**Phenylhydrazonoanisoylacetic acid**, and *p*-nitro-, and their methyl esters (Wahl and Silberzweig), 1912, A., i, 214.
**α-Phenylhydrazonoazo-*o*-methoxybenzoylacetic acid**, and *p*-nitro-, methyl esters (Wahl and Silberzweig), 1912, A., i, 213.
**Phenylhydrazono-*m*-methoxybenzoylacetic acid**, and *p*-nitro-, methyl esters (Wahl and Silberzweig), 1912, A., i, 214.
**4-Phenylhydrazono-1-*p*-nitrophenyl-3-*o*-, and *p*-methoxyphenyl-5-pyrazolones** (Wahl and Silberzweig), 1912, A., i, 214.
**4-Phenylhydrazono-1-phenyl-3-*o*-, -*m*-, and -*p*-methoxyphenyl-5-pyrazolones**, and 4-*p*-nitro- (Wahl and Silberzweig), 1912, A., i, 214.
**Phenylhydrazopyrazolone** (Wahl and Doll), 1912, A., i, 626.
**Phenylhydrazo-α- and -β-thiodicarbonamide** (Pellizzari, Accame, and Laria-Botte), 1911, A., i, 336.

**3-Phenyl-1-hydrindone-2-propionic acid**, 3-hydroxy-, lactone of (Stobbe and Gollücke), 1906, A., i, 361.

**Phenylhydrizinoaminomethylenecarboxylic acid** and its ethyl ester, and *p*-chloro-, and amide (Bowack and Lapworth), 1905, T., 1864.

**Phenylhydrizinohalogenmethylenecarboxylic acids** and their bromo-, chloro-, and nitro-derivatives, ethyl esters (Bowack and Lapworth), 1905, T., 1857.

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**α-Phenylhydrohydrastinine** (Freund and Lederer), 1911, A., i, 907.

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**Phenyl-$\Delta^1$-hydrophthalamic acid** and *p*-hydroxy- (Piutti and Abati), 1903, A., i, 424.

**Phenylhydrotiglic acid**, synthesis of (Eykman), 1908, A., i, 795.

**5-Phenylhydrotriazine**, 3-thio-, and the disulphide (Wolff and Lindenhayn), 1904, A., i, 198.

**Phenylhydroxyacetylalanine** (Fischer and Schmidlin), 1905, A., i, 694.

**1-Phenyl-4-*p*-hydroxybenzylhydantoin** (Paal and Zitelmann), 1904, A., i, 100.

**1-Phenyl-4-*p*-hydroxybenzylhydantoin**, 2-thio- (Brautlecht), 1911, A., i, 923.

**3-Phenyl-4-*op*- and -*mp*-*di*hydroxybenzylidene*iso*oxazolones** (Meyer), 1912, A., i, 1019.

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**α-Phenyl-*o*-hydroxycinnamonitrile** (Borsche and Streitberger), 1904, A., i, 893.

**Phenyl*di*-*p*-hydroxydi-*p*-xylylmethane** and its diacetate (Schultz and Peteny), 1907, A., i, 1075.

**Phenyl α-hydroxyethyl ketone**, *p*-bromo-, and its acetyl derivative (Kohler), 1909, A., i, 394.

**Phenylhydroxyglyoxime** *per*oxide (Wieland), 1903, A., i, 770.

**δ-Phenylhydroxyhydrazone-αα-dimethylpropionylacetic acid**, γ-oximino-. See Anilinoglyoximedimethylmalonylic acid.

**Phenylhydroxylamine**, behaviour of, towards hydroxylamine and air (Bamberger), 1903, A., i, 84.

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**Phenylhydroxylamine**, *p*-chloro- (Bamberger and Baudisch), 1909, A., i, 978.

*p*-hydroxy-, methyl and ethyl ethers of. See *p*-Anisylhydroxylamine and *p*-Phenetylhydroxylamine.

*m*-nitro- (Brand), 1906, A., i, 80.

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**β-Phenylhydroxylamine**, compounds of, with aromatic aldehydes (Plancher and Piccinini), 1905, A., i, 705.

**β-Phenylhydroxylamine**, β-cyano-, and its iminochloride hydrochloride (Wieland, Roseeu, and Gambarjan), 1912, A., i, 907.

**Phenyl 3-hydroxy-4-methoxystyryl ketone**, 2:4:6-*tri*hydroxy-. See Hesperitin.

**Phenyl 4-hydroxy-3-methoxystyryl ketone**, 2:4:6-*tri*hydroxy-. See Homoeriodictyol.

**γ-Phenyl-α-hydroxymethylhydantoin** (Leuchs and Geiger), 1906, A., i, 806.

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**Phenyl-α-hydroxynaphthylmethane**, *p*-amino-, and its acetyl derivative (Friedländer and v. Horvath), 1903, A., i, 253.

**Phenyl-8-hydroxynaphthyl-1:2-triazole-3:6-disulphonic acid**, *p*-amino-, sodium hydrogen salt (Gesellschaft für Chemische Industrie in Basel), 1904, A., i, 353.

**3-Phenyl-2-*o*-hydroxyphenyl-3:4-dihydro-1:3-benzoxazine**, 4-cyano-, derivatives of (Rohde and Schärtel), 1910, A., i, 775.

**α-Phenyl-α′-4-hydroxyphenylethane**, resolution of, by *l*-menthylcarbimide (Pickard and Littlebury), 1906, T., 467; P., 71.

**1-Phenyl-5-*o*-hydroxyphenyl-3-ethyl-** and **3-propyl-pyrazoline** (AUWERS and VOSS), 1910, A., i, 71.

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**3-Phenyl-2-*o*-hydroxystyryl-4-dihydro-quinazolone** (BOGERT and BEAL), 1912, A., i, 394.

**Phenyl 2-hydroxystyryl ketone**, 2:4-*di*hydroxy- (DUTTA and WATSON), 1912, T., 1242.

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**α-Phenyl-α-*p*-hydroxytolylethylene** and its sodium derivative and phenylurethane (STOERMER and KIPPE), 1904, A., i, 182.

**Phenyl-*m*-hydroxytolylethylene** (STOERMER and DECKER), 1911, A., i, 665.

**Phenyl 2-hydroxy-*m*-tolyl ketone**, phenylhydrazone, and its *O*-acetate, diacetate, and *N*-acetyl derivative (?) (AUWERS and DANNEHL), 1909, A., i, 441.

**Phenyl 6-hydroxy-*m*-tolyl ketone**, and its ethyl ether, and 4-nitro- (AUWERS), 1904, A., i, 66.

**Phenyl 2-hydroxy-*p*-tolyl ketone**, 5-chloro-2-amino- and its derivatives (ZINCKE and SIEBERT), 1906, A., i, 516.

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***o*-Phenyliminobenzoquinonediphenyl-hydrazone**, and *p*-hydroxy-, hydrochlorides (WIELAND and WECKER), 1911, A., i, 82.

**β-Phenyliminobenzoyldihydrocarvone** and its cyanohydrin (CLARKE and LAPWORTH), 1907, T., 699; P., 90.

**Phenylimino-*di*- and -*tri*-bromo-benzoquinones**, 2:4:6-*tri*bromo- (SMITH and ORTON), 1907, T., 150; P., 14.

**Phenyliminocamphor** and *m*- and *p*-hydroxy-, and *p*-chloro- (FORSTER and THORNLEY), 1909, T., 949.
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**Phenylimino-2:3:6-*tri*chlorobenzoquinone**, *s*-*tri*chloro- (ORTON and SMITH), 1905, T., 390; P., 92.

***C*-Phenyliminodiacetic acid** and its derivatives (STADNIKOFF), 1909, A., i, 106.

**2-Phenyliminodiethylbarbituric acid.** See Diethylmalonylphenylguanidine.

**2-Phenylimino-2:3-dihydro-1:3:4-thiodiazole-3-propionic acid**, 5-hydroxy-, and its ethyl ester, amide, and benzoyl derivative (BAILEY, ACREE, and MILLER), 1904, A., i, 827.

**2-Phenylimino-5:5-dimethylbarbituric acid.** See Dimethylmalonylphenylguanidine.

**2-Phenylimino-3:4-dimethyl-2:3-dihydrothiazole** and its platinichloride and hydrolysis (YOUNG and CROOKES), 1905, P., 308; 1906, T., 65.

**Phenyliminodiphenylacetic acid**, ethyl and methyl esters (STOLLÉ and SCHMIDT), 1912, A., i, 981.

**2-Phenylimino-3:4-diphenyl-2:3-thiazoline** and its salts and picrate (V. WALTHER and GREIFENHAGEN), 1907, A., i, 349.

**Phenylimino-α-ethoxynaphthyl-4-ethoxynaphthatriazine** (BUSCH and BERGMANN), 1905, A., i, 310.

**2-Phenylimino-5-ethyl-** and **-5-phenyl-tetrahydrothiazoles** (KOLSHORN), 1904, A., i, 675.

**2-Phenyliminohexahydro-6-pyrimidone**, 4-imino-, and its 5:5-diethyl derivative (MERCK), 1907, A., i, 1039.

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**Phenyliminomalonic acid**, methyl ester (CURTISS and SPENCER), 1909, A., i, 764.
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**2-Phenylimino-5-methyltetrahydrothiazole** (YOUNG and CROOKES), 1905, P., 308; 1906, T., 68.

**2:5-Phenylimino-1-β-naphthyl-2:3-dimethylpyrazole** (1-β-*naphthylanilopyrine*) and its derivatives (MICHAELIS and DANZFUSS), 1905, A., i, 481.

- **Phenyliminophenylamino-.** See Anilinophenylimino-.
- **Phenyliminophenyl-naphthatriazine, -bromonaphthatriazine, -4-ethoxynaphthatriazine, and -4-ethoxydihydronaphthatriazine** (Busch and Bergmann), 1905, A., i, 310.
- **4-Phenylimino-3-phenylquinazoline-2-carboxylic acid**, ethyl ester (Bogert and Gortner), 1910, A., i, 284.
- **Phenyliminophosphorylbenzamide** (Titherley and Worrall), 1909, T., 1152 ; P., 150.
- **Phenyliminophosphorylphenylbenzamidine** (Titherley and Worrall), 1909, T., 1154 ; P., 150.
- **Phenyliminoquinone.** See Benzoquinoneanil.
- **Phenyliminotolyltolutriazine**, *m*-nitro- (Busch and Bergmann), 1905, A., i, 309.
- **2-Phenylindazole** from benzene-*o*-azobenzyl alcohol (Freundler), 1903, A., i, 585.
- **2-Phenylindazole**, 3:5:7-*tri*chloro- (Freundler), 1911, A., i, 815.
  - chloro-3-hydroxy- (Freundler), 1906, A., i, 544.
  - 5:7-*di*chloro-3-hydroxy-2-*p*-chloro- (Freundler), 1911, A., i, 753.
  - 2:5:7-*tri*chloro-3-hydroxy- (Freundler), 1911, A., i, 577.
  - 3-hydroxy-, and its chloro-derivatives (Freundler), 1907, A., i, 158.
- **1-Phenyl-1-indenol**, 2:3-*di*bromo-, and its acetyl derivative (Simonis and Kirschten), 1912, A., i, 271.
- **1-Phenyl-4:5-indenopyrazole-3-carboxylic acid** and its ethyl ester and silver salt (Ruhemann), 1912, T., 1736 ; P., 224.
- **6-Phenyl-2:3-indeno-4-pyrone** and its platinichloride (Ruhemann), 1912, T., 1738 ; P., 225.
- **Phenylindole**, additive compounds of, with trinitrotoluene and picryl chloride (Ciusa and Vecchiotti), 1912, A., i, 756.
- **2-Phenylindole**, *o*-amino-, and its picrate (Kliegl and Haas), 1911, A., i, 433.
  - 3-amino-, 1-hydroxy-, and 3-*iso*nitroso- (Angeli and Angelico), 1904, A., i, 526.
  - 6-amino-, and its hydrochloride (Borsche), 1909, A., i, 233.
  - 3-imino- (Kalb and Bayer), 1912, A., i, 726.
  - 3-nitroso-, ethyl ether of (Castellana and d'Angelo), 1905, A., i, 940.
  - 3-nitroso-1-hydroxy-, and its acyl and ethyl derivatives (Angeli and Angelico), 1907, A., i, 153.
- **2-Phenylindolediazohydroxide**, anhydride of (Angeli and d'Angelo), 1904, A., i, 537.
- **3-Phenyl*iso*indolinone**, 3-hydroxy- (Béis), 1904, A., i, 671.
- **2-Phenylindolone** and its derivatives (Kalb and Bayer), 1912, A., i, 726.
- **2-Phenylindone**, 4-nitro- (*phenyl-o-nitroindone*), constitution of, and of its ozonide (Bakunin and Angrisani), 1912, A., i, 867.
  - ozonisation products of (Bakunin), 1912, A., i, 344.
  - oxime and phenylhydrazone of (Bakunin and Parlati), 1906, A., i, 665.
- **Phenylindones**, nitro-, and their oximes and phenylhydrazones (Bakunin and Parlati), 1907, A., i, 416.
  - photochemical reactions of (Bakunin and Lanis), 1911, A., i, 992 ; (Bakunin), 1912, A., i, 344, 356.
- **Phenylindoneacetic acid**, methyl ester (Stobbe and Seydel), 1910, A., i, 46.
- **γ-Phenyl-α-indonepropionic acid** (Stobbe and Gollücke), 1906, A., i, 361.
- **Phenylindoxazen**, crystallography of (Jaeger), 1907, A., i, 1050 ; 1908, A., i, 988.
- **Phenylindoxazen**, 5-nitro- (Willgerodt and Gartner), 1908, A., i, 877.
- **2-Phenylindoxyl** and its compound with 2-phenylindolone (Kalb and Bayer), 1912, A., i, 727.
- **2-Phenylindoxyl**, 6-nitro- (Pfeiffer, Fornet, Kramer, Matzke, and Spiro), 1912, A., i, 619.
- **2-Phenylindyl-3-benzoquinone** (Möhlau and Redlich), 1912, A., i, 129.
- **Phenyliodomethylthiolphenyl-*p*-tolylthiodiazoline** (Busch and Blume), 1903, A., i, 535.
- **2-Phenylisatogen**, 6-nitro- (Pfeiffer, Fornet, Kramer, Matzke, and Spiro), 1912, A., i, 619.
- **2-Phenylisatogen-6-carboxylic acid**, ethyl ester (Pfeiffer, Fornet, Kramer, Matzke, and Spiro), 1912, A., i, 619.
- **Phenylisoprene** and its bromo-derivatives (Courtot), 1906, A., i, 927.
- **Phenylitaconamic acid**, *p*-hydroxy-, and its silver salt (Piutti, Foa, and Rossi), 1910, A., i, 673.
- **Phenylitacondiamide**, *p*-hydroxy- (Piutti, Foa, and Rossi), 1910, A., i, 674.
- **Phenylitaconic acid** and its methyl ester (Hecht), 1903, A., i, 700.

**Phenylitaconic acid** and its barium, calcium, and silver salts (Stobbe and Horn), 1909, A., i, 105.
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**Phenylitaconimide,** *p*-hydroxy- (Piutti, Foa, and Rossi), 1910, A., i, 673.
**Phenylketen,** attempt to prepare (Staudinger and Bereza), 1911, A., i, 307.
**Phenylketentriethylium,** chloro- (Wedekind and Miller), 1909, A., i, 459.
*a*-**Phenyl-lactamide** (Staudinger and Ružička), 1911, A., i, 463.
*β*-**Phenyl-*β*-lactamide** and the action of sulphuric acid on (Posner), 1905, A., i, 577.
**Phenyl-lactic acid,** *p*-hydroxy-, behaviour of, in the animal body (Kotake), 1911, A., ii, 59.
*l*-**Phenyl-lactic acid,** hydroxy-, and its calcium salt, and its presence in the urine of dogs poisoned with phosphorus (Kotake), 1910, A., i, 384.
*β*-**Phenyl-lactic acid,** *a*-chloro-, ammonium and aniline salts of (Rassow and Burmeister), 1912, A., i, 32.
*β*-**Phenyl-*a*-lactic acid** (Posner), 1904, A., i, 161.
*β*-**Phenyl-*a*-lactic acid,** *β*-amino-, and its derivatives and isomerides (Erlenmeyer and Barkow), 1906, A., i, 237.
*p*-chloro- (Friedmann and Maase), 1910, A., ii, 794.
*p*-hydroxy-, behaviour of, in the liver (Schmitz), 1910, A., ii, 984.
*β*-**Phenyl-*β*-lactic acid** and its halogen derivatives, stereochemistry of (Erlenmeyer), 1906, A., i, 274.
**Phenyl-lactoketone,** *o*-nitro-, preparation of (Société Chimique des Usines du Rhône), 1904, A., i, 325.
**Phenyl-*β*-lactomethyl ketone,** *o*-nitro-, soluble preparations of (Farbwerke vorm. Meister, Lucius, & Brüning), 1906, A., i, 97.
**Phenyl-lactyl methyl ketone,** *op*-*di*nitro-, and its phenylhydrazone (Friedländer and Cohn), 1903, A., i, 264.
6-nitro-3-amino-, acetyl derivative (Friedländer and Fritsch), 1903, A., i, 347.
**Phenyl-*dl*-leucine,** 2:4-*di*nitro-, and chloro-2:4-*di*nitro- (Abderhalden and Blumberg), 1910, A., i, 371.
**Phenyl-*aa*′-lutidylalkine,** *m*-nitro-. See Dihydrostyryl-6-methylpyridine, 2-*m*-nitro-*a*-hydroxy-.
**Phenylmaleimide,** *p*-hydroxy- (Piutti), 1910, A., i, 23.
**Phenylmaleinamic acid,** *p*-hydroxy- (Piutti), 1910, A., i, 23.
**Phenylmalonic acid,** 2-bromo-3-iodo-4:6-*di*nitro-, ethyl ester (Jackson and Bigelow), 1912, A., i, 102.
*tri*chloro*di*nitro-, ethyl ester (Jackson and Carlton), 1904, A., i, 486.
iodo*di*nitro-, ethyl ester (Jackson and Langmaid), 1904, A., i, 861.
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2:6-*di*nitro-, ethyl ester (Borsche and Rantscheff), 1911, A., i, 332.
**Phenylmalononitrile** and its sodium derivative (Hessler), 1904, A., i, 831.
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**Phenylmalonyl chloride** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1025.
*a*-**Phenylmeconine** (Mermod and Simonis), 1908, A., i, 343.
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**2-Phenyl-$\Delta^{6:8(9)}$-menthadien-2-ol** and **-$\Delta^{2:6:8(9)}$-menthatriene** (Klages and Sommer), 1906, A., i, 567.
**2-Phenylmenthatriene** and its optical constants (Klages), 1907, A., i, 597.
**Phenylmenthyl*iso*amylmethane** and its benzoate (Bödtker), 1912, A., i, 278.
**Phenylmenthylbenzamidine** and its hydrochloride and platinichloride (Cohen and Marshall), 1910, T., 330.
**Phenylmenthylethylbenzamidine** and its derivatives (Cohen and Marshall), 1910, T., 331.
**Phenylmenthylethylmethane** (Bödtker), 1907, A., i, 857.
**Phenylmenthylmethylmethane** and its benzoate (Bödtker), 1912, A., i, 278.
**Phenylmercuriammine** salts (Pesci), 1909, A., i, 348.
**Phenylmercuric oxides,** *p*-chloro-, 4-chloro-2-nitro-, and *o*-nitro- (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 1056.
**Phenylmetasilicic acid,** anhydride of (Kipping and Hackford), 1911, T., 144 ; P., 9.
**Phenylmethane.** See Toluene.

**Phenylmethanes,** their carbinols and chlorides, phenyl-substitution in the (Schmidlin), 1903, A., ii, 530.

**Phenylmethanebisnitrophenylsulphone,** nitro- (Fromm and Wittmann), 1908, A., i, 632.

**Phenylmethanedisalicylic acid** and its diacetyl derivative (Madsen), 1907, A., i, 424.

**Phenylmethanesalicylic acid.** See Phenylhomosalicylic acid.

**Phenylmethenylamidine,** 2:4:5-*tri*chloro- (Badische Anilin- & Soda-Fabrik), 1907, A., i, 444.

**Phenylmethoxyacetic acid,** affinity constant of (Findlay, Turner, and Owen), 1909, T., 938 ; P., 146.

*l*-**Phenylmethoxyacetic acid,** methyl ester (McKenzie and Wren), 1910, T., 484.

**1-Phenyl-4-*p*-methoxybenzylhydantoin,** 2-thio- (Johnson and Brautlecht), 1911, A., i, 814.

**2-Phenyl-*p*-methoxybenzylideneoxazolone** (Erlenmeyer and Wittenberg), 1905, A., i, 240.

**3-Phenyl-5-*p*-methoxybenzylidenerhodanic acid** (Andreasch and Zipser), 1903, A., i, 856.

**1-Phenyl-4-*p*-methoxybenzyl-3-methyl-2-thiohydantoin** (Johnson and Nicolet), 1912, A., i, 585.

**α-Phenyl-*p*-methoxycinnamic acid** (Bodroux), 1911, A., i, 783.

**α-Phenyl-*p*-methoxycinnamic acid,** *p*-nitro- (Hewitt, Lewcock, and Pope), 1912, T., 608.

**Phenylmethoxyglyoxime** *per*oxide (Wieland), 1903, A., i, 770.

**Phenyl-3-methoxy-4:5-methylenedioxybenzyl-carbamide and -thiocarbamide** (Rügheimer and Ritter), 1912, A., i, 447.

**Phenyl methoxymethyl ether,** and *p*-nitro- (Hoering and Baum), 1909, A., i, 572.

*s*-**Phenylmethoxymethylthiocarbamide** (Johnson and Guest), 1910, A., i, 730.

**Phenyl α-methoxynaphthyl ketone,** 2-amino- and 2-hydroxy- (Ullmann and Denzler), 1907, A., i, 143.

**Phenyl-β-methoxynaphthyl-ketonesulphonic acid,** 2-amino- (Ullmann and Denzler), 1907, A., i, 143.

**Phenyl δ-*p*-methoxyphenylbutadiene ketone** (Scholtz and Wiedemann), 1903, A., i, 437.

**1-Phenyl-5-*o*-methoxyphenyl-3-methylpyrazoline** (Auwers and Voss), 1910, A., i, 71.

**2-Phenyl-4-*p*-methoxyphenyl-7-methyl-5:6:7:8-tetrahydroquinoline** and its salts (Cruikshanks and Schwyzer), 1912, A., i, 785.

**β-Phenyl-β-*p*-methoxyphenylpropionic acid** and its salts (Fosse), 1907, A., i, 136.

**1-Phenyl-3-*o*-methoxyphenyl-5-pyrazolone,** 1-*p*-nitro- (Wahl and Silberzweig), 1912, A., i, 213.

**1-Phenyl-3-*m*-methoxyphenyl-5-pyrazolone** and 4-oximino- (Wahl and Silberzweig), 1912, A., i, 214.

**1-Phenyl-3-*p*-methoxyphenyl-5-pyrazolone,** 1-*p*-nitro-, and 4-oximino- (Wahl and Silberzweig), 1912, A., i, 214.

**6-Phenyl-4-*p*-methoxyphenyl-2-*p*-tolylpyridine,** 3-cyano- (v. Meyer and Irmscher), 1908, A., i, 912.

**3-Phenyl-5-*p*-methoxystyryl*cyclo*hexan-5-ol-1-one-2-carboxylic acid,** ethyl ester (Borsche), 1910, A., i, 683.

**3-Phenyl-5-*p*-methoxystyryl-$\Delta^5$-*cyclo*hexen-1-one-2-carboxylic acid,** ethyl ester (Borsche), 1910, A., i, 683.

**Phenyl α-methoxystyryl ketone** (*α-methoxybenzylideneacetophenone*) (Sluiter), 1905, A., i, 796.
 oxime of (Abell), 1912, T., 994.

**Phenyl *o*-methoxystyryl ketone** (*o-methoxybenzylideneacetophenone*) (Stobbe and Wilson), 1910, T., 1724; P., 206.

**Phenyl *m*-methoxystyryl ketone,** 2-hydroxy- (Gutzeit and v. Kostanecki), 1905, A., i, 366.

**Phenyl *p*-methoxystyryl ketone** (*anisylideneacetophenone*) *di*bromide, elimination of bromine from (Wilson and Boon), 1911, P., 197.
 and its alkyloxy- and hydroxy-derivatives (Werner, Schorndorff, and Chorower), 1906, A., i, 181.
 hydrochlorides and dipicrate (Vorländer, Siebert, and Rolle), 1905, A., i, 793.
 ψ-nitrosite and α-nitro-derivatives of (Wieland and Bloch), 1905, A., i, 707.

**Phenyl-*p*-methoxy-*o*- and -*m*-tolyliodonium iodides** (Willgerodt and Schloss), 1911, A., i, 716.

**1-Phenyl-3-methyl-5-acetonylpyrazole-4-carboxylic acid** and its silver salt, oxime, and methyl ester (Benary), 1910, A., i, 435.

*iso***Phenylmethylacetyl*cyclo*pentenephenazine** (Ruhemann), 1910, T., 1444.

**5-Phenyl-3-methylacridine,** 2-amino-8-hydroxy-, and its hydrochloride and acetyl derivative (Ullmann and Fitzenkam), 1906, A., i, 46.

**Phenylmethylacridinium** methyl sulphate (Ullmann), 1903, A., i, 395.

*p*-toluenesulphonate (Ullmann and Werner), 1903, A., i, 407.

**5-Phenyl-10-methylacridinium** hydroxide and salts, 3-amino- and 3-hydroxy-, and their acetyl derivatives (Kehrmann and Stépanoff), 1909, A., i, 54.

thiocyanate (Hantzsch), 1911, A., i, 675.

**Phenylmethylacridol,** constitution of (Dobbie and Tinkler), 1905, T., 269; P., 74.

**β-Phenyl-α-methylacrylic acid,** crystallography of nitro-derivatives of (Ranfaldi), 1911, A., i, 129.

ethyl ester (Posner), 1911, A., i, 53.

**β-Phenyl-α-methylacrylic acid,** *o*-hydroxy-, ethyl ester (Stoermer and Friderici), 1908, A., i, 181.

**β-Phenyl-β-methylacrylic acid,** α-cyano- (Knoevenagel), 1906, A., i, 482.

**Phenyl-*N*-methylalanine** (Friedmann and Gutmann), 1910, A., i, 741.

**Phenylmethylallylammonium compounds,** influence of constitution on the rotatory power of (Thomas and Jones), 1906, T., 297; P., 11.

**Phenylmethylallylarsine** (Winmill), 1912, T., 724.

**Phenylmethylaminoacetonitrile,** *p*-bromo- (v. Braun), 1908, A., i, 625, 628.

*p*-iodo- (v. Braun), 1908, A., i, 628.

**ω-Phenylmethylaminoacetophenone** phenylhydrazone and semicarbazone (Busch and Hefele), 1911, A., i, 584.

**Phenylmethylaminocarbinol,** *di*hydroxy- (Farbwerke vorm. Meister, Lucius, & Brüning), 1908, A., i, 418.

**6-Phenylmethylamino-dihydro-2-pyrimidone** and **-3-methyldihydro-2-pyrimidine** (Johnson and Clapp), 1908, A., i, 836.

**Phenylmethylaminodimethylcarbinol** and its dibenzoyl derivative (Riedel), 1906, A., i, 632.

**Phenylmethylamino-dimethyl-** and **-ethyl-carbinols** and their additive salts and dibenzoyl derivatives (Fourneau), 1905, A., i, 57.

**3-Phenylmethylamino-1:5-diphenyl-1:2:4-triazole** (Wheeler and Beardsley), 1903, A., i, 294.

***o*-Phenylmethylamino*cyclo*hexanol** (Brunel), 1905, A., i, 869.

**Phenylmethylaminomethanesulphonic acid,** sodium salt (Knoevenagel), 1904, A., i, 867.

**2-Phenylmethylamino-5-methyl-4:5-dihydrothiazole** and its platinichloride and picrate (Young and Crookes), 1906, T., 70.

**1-Phenylmethylaminopyrrole-2:5-dibenzoic acid** and its salts, ester, and anhydride (Reissert and Engel), 1905, A., i, 899.

**Phenyl *o*-methylaminostyryl ketoneanil** (Kaufmann and Plá y Janini), 1911, A., i, 916.

**Phenylmethylammonium** osmichloride (Gutbier and Walbinger), 1911, A., i, 191.

platinibromide (Gutbier, Bauriedel, and Obermaier), 1911, A., i, 33.

**Phenylmethyl*iso*amylcarbinol,** synthesis of (Schorigin), 1908, A., i, 867.

**Phenylmethyl*iso*amyloxymethylthiocarbamide** (Johnson and Guest), 1909, A., i, 371.

**1-Phenyl-2-methyl-4-*iso*amylurazole** (Nirdlinger, Acree, and Heaps), 1910, A., i, 342.

**1-Phenyl-3-methyl-4-antipyrinylpyrazole,** 5-amino-, and its acetyl derivative (Michaelis, Rademacher, and Schmiedekampf), 1907, A., i, 733.

**1-Phenyl-3-methyl-4:5-aziminopyrazole** and its phenanthrazine derivative (Michaelis and Klopstock), 1907, A., i, 736.

**5-Phenyl-5-methylbarbituric acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1025.

**1-Phenyl-2-methylbenziminazole** (Wolff), 1912, A., i, 1028.

**1-Phenyl-2-methylbenziminazole,** 5-amino-, and 5-nitro-, and its additive salts (v. Walther and Kessler), 1904, A., i, 348.

and its salts, acetyl, benzeneazo-, phenylcarbamide, thiocarbamide, and *o*- and *p*-nitrobenzylidene derivatives, and 5-nitro-, and its salts (v. Walther and Kessler), 1906, A., i, 898.

7-nitro-6-hydroxy- (Meldola and Hay), 1907, T., 1482.

4:7-*di*nitro-6-hydroxy-, and its acetyl derivative and methyl ether, and its *o*-, *m*-, and *p*-chloro-, and *p*-nitro-derivatives and salts of the *p*-nitro-compound (Meldola and Hay), 1908, T., 1671.

**1-Phenyl-2-methylbenziminazole,** 4:7-*di*nitro-6-hydroxy-, and 4:7-*m*-*tri*nitro-6-hydroxy-, synthesis of (Meldola), 1906, T., 1939.

4:7-*di*nitro-6-hydroxy-*p*-amino-, and its acetyl derivative (Meldola and Kuntzen), 1911, T., 38.

*di*nitrohydroxy-1-*o*-, -*m*-, and -*p*-bromo-, and *di*-nitrohydroxy-1-*o*-, -*m*-, and -*p*-hydroxy-, and their acetyl, nitro-, and sulphonic acid derivatives (Meldola and Hay), 1909, T., 1040.

**5-Phenyl-2-methylbenziminazole** and 7-amino- (Fichter and Sulzberger), 1904, A., i, 325.

**1-Phenyl-3-methylbenziminazolol,** 5-nitro- (v. Walther and Kessler), 1906, A., i, 899.

**5-Phenyl-6-methyl-1:2:3:7:9-benzopentazole** (Bülow), 1910, A., i, 81.

**7-Phenyl-5-methyl-1:2:4:9-benzotetrazole** (4-*phenyl*-6-*methyl*-2:3:7:0-*diazpyridazine*) (Bülow and Weber), 1909, A., i, 615.

**6-Phenyl-2-methyl-1:3:7:9-benzotetrazole,** 4-hydroxy- (Bülow and Haas), 1910, A., i, 203.

**6-Phenyl-4-methyl-1:3:7:9-benzotetrazole** (Bülow and Haas), 1910, A., i, 80.

**1-Phenyl-5-methyl-1:2:3-benzotriazole** (Borsche and Feise), 1907, A., i, 243.

**1-Phenyl-6-methyl-1:2:3-benzotriazole** (Borsche, Witte, and Bothe), 1908, A., i, 367.

**2-Phenyl-5-methyl-1:2:3-benzotriazole-3′-carboxylic acid,** 4′-hydroxy-, and its acetyl derivative (Grandmougin and Guisan), 1907, A., i, 1092.

**1-Phenyl-3-methylbenzoxazole,** 5-hydroxy-, and its 5-benzoyl and 5-methyl derivatives and **1-Phenyl-5-methylbenzoxazole,** 3-hydroxy- (Henrich and Opfermann), 1904, A., i, 934.

**Phenyl-α-methylbenzylsulphone**(Posner and Tscharno), 1905, A., i, 279.

**Phenylmethylbromoarsine** (Winmill), 1912, T., 723.

**1-Phenyl-2-methyl-3-bromomethyl-4-ethyl-5-pyrazolone** (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 257.

**1-Phenyl-2-methyl-3-bromomethyl-4-ethyl-5-pyrazolone,** *p*-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 340.

**β-Phenyl-α-methylbutaldehyde** and its semicarbazone (Darzens), 1907, A., i, 182.

**α-Phenyl-β-methylbutane-αγ-dione** (*methylbenzylacetone*), and its copper salt (Dieckmann), 1912, A., i, 868.

**α-Phenyl-γ-methylbutan-β-one** and its semicarbazone (Senderens), 1910, A., i, 489.

**α-Phenyl-γ-methyl-$\Delta^{\alpha}$-buten-γ-ol** and its reduction (Klages, Gieser, and Lauck), 1906, A., i, 662.

**Phenyl α-methylbutenyl ketone,** dibromide of (Reynolds), 1910, A., i, 858.

**α-Phenyl-β-methylbutyl alcohol** and its acetate (Blaise and Courtot), 1906, A., i, 795.

**Phenylmethyl-*n*-butylallylammonium** salts and *p*-bromo-, optical activity of (Everatt), 1903, T., 1227 ; P., 148.

**1-Phenyl-3-methyl-2-*iso*butyl-2-benziminazolol,** 4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 2044.

**1-Phenyl-3-methyl-2-*iso*butyl-6-benziminazolone,** 4:7-*di*nitro- (Meldola and Kuntzen), 1911, T., 2043.

**β-Phenyl-α-methyl-α-*tert.*-butylcarbamide** (Sabatier and Mailhe), 1907, A., i, 490.

**α-Phenyl-γ-methyl-$\Delta^{\beta}$-butylene** ozonide (Harries and de Osa), 1904, A., i, 386.

**γ-Phenyl-γ-methyl-$\Delta^{\beta}$-butylene** α-oxide (Lepin), 1912, A., i, 958.

**α-Phenyl-γ-methylbutylenes** (Klages), 1904, A., i, 569.

**β-Phenyl-γ-methylbutylene-βγ-glycol** (Lepin), 1912, A., i, 958.

**α-Phenyl-α-methylbutylmalonic acid** (Inglis), 1911, T., 543.

**1-Phenyl-4-methyl-3-*tert.*-butyl-5-pyrazolone** (Wahlberg), 1911, A., i, 708.

**1-Phenyl-2-methyl-4-butylurazole** (Nirdlinger, Acree, and Heaps), 1910, A., i, 342.

**α-Phenyl-γ-methyl-α-*iso*butylvaleric acid** (Bodroux), 1910, A., i, 672.

**α-Phenyl-γ-methyl-α-*iso*butylvaleronitrile** (Bodroux and Taboury), 1910, A., i, 482.

**α-Phenyl-β-methyl-*n*-butyramide** (Bodroux and Taboury), 1910, A., i, 257.

**α-Phenyl-α-methylbutyric acid,** synthesis of (Eykman), 1908, A., i, 795.

**α-Phenyl-β-methylbutyric acid** (Bodroux and Taboury), 1910, A., i, 557.

synthesis of, and its amide and anilide (Eykman), 1908, A., i, 795.

*α*-**Phenyl-*β*-methylbutyric acid**, *αβ-di*bromo- (Blaise and Courtot), 1906, A., i, 795.

*α*-**Phenyl-*β*-methylbutyronitrile** (Bodroux and Taboury), 1910, A., i, 257.

**Phenylmethylcarbamic acid** and its nitro-derivatives, esters, crystallography of (Jaeger), 1906, A., i, 15.
  methyl ester (Slosson), 1903, A., i, 475.

*β*-**Phenyl-*α*-methylcarbamide**, isomeric nitro-derivatives (Scholl and Holdermann), 1906, A., i, 767.

*β*-**Phenyl-*α*-methylcarbamide**, *α*-nitro-, conversion of, into *s*-nitrophenylmethylcarbamide (Scholl and Nyberg), 1906, A., i, 656.

*s*-**Phenylmethylcarbamidoazobenzene** (Dimroth), 1905, A., i, 311.

*d*-**Phenylmethylcarbinol**, and the brucine salt of the hydrogen succinate of (Pickard and Kenyon), 1911, T., 60.

**Phenylmethylcarbinols**, optically active (Holmberg), 1912, A., i, 448; (Pickard and Kenyon), 1912, A., i, 554.

**3-Phenyl-8-methyl*iso*carbostyril** (Müller), 1909, A., i, 160.

**Phenyl-3-methyl-2-carboxyphenylthiolacetic acid**, 5-chloro- (Kalle & Co.), 1912, A., i, 209.

**2-Phenyl-7-methylcinchonic acid** (Borsche), 1909, A., i, 53.

**4-Phenyl-3-methylcinnoline** and its platinichloride (Stoermer and Fincke), 1909, A., i, 843.

**4-Phenyl-3-methylcinnolinic acid** (Stoermer and Fincke), 1909, A., i, 843.

**2-Phenyl-4-methylcoumaran** and **2-Phenyl-4-methylcoumarone**, 1-chloro- (Stoermer and Kippe), 1904, A., i, 182.

*β*-**Phenyl-*α*-methylcoumarin** (Stoermer and Friderici), 1908, A., i, 181.

**3-Phenyl-8-methyl*iso*coumarin** (Müller), 1909, A., i, 160.

**1-Phenyl-4-methylcoumarone** (Stoermer and Decker), 1911, A., i, 665.

**2-Phenyl-4-methylcoumarone** and 1-bromo-, and 1-nitro- (Stoermer and Decker), 1911, A., i, 665.

**2-Phenyl-5-methylcoumarone**, and 1- and 4-bromo- and 1-chloro- (Stoermer and Decker), 1911, A., i, 665.

**Phenylmethylcyanoacetiminoethyl ether** (Hessler), 1904, A., i, 831.

**Phenylmethylcyanomethylethylammonium iodide** (v. Braun), 1908, A., i, 628.

**4-Phenyl-6-methyl-2:3:7:0-diazpyridazine.** See 7-Phenyl-5-methyl-1:2:4:9-benzotetrazole.

*α*-**Phenylmethyldiethylbetaine** (Klages and Margolinsky), 1904, A., i, 146.

**Phenylmethyldiguanide** (Cohn), 1911, A., i, 929.

**5-Phenyl-3-methyldihydroacridine**, 8-hydroxy- (Pope and Howard), 1910, T., 83.

**5-Phenyl-10-methyldihydroacridine**, *di*bromocyano- (Kaufmann, Widmer, and Albertini), 1911, A., i, 749.
  5-cyano-, platinichloride (Kaufmann, Albertini, and Holsboer), 1909, A., i, 606.
  hydroxy- (Bünzly and Decker), 1904, A., i, 344.

**5-Phenyl-10-methyldihydroacridine-*o*-carboxylic acid**, 5-amino-, lactams of (Decker and Schenk), 1906, A., i, 305.
  5-hydroxy-, lactone of, and its betaine compound (Decker and Hock), 1904, A., i, 451.

**5-Phenyl-10-methyldihydroacridinol**, 3:7-*di*bromo-, ethyl ether (Kaufmann, Widmer, and Albertini), 1911, A., i, 749.

**9-Phenyl-10-methyldihydroanthracene**, 9:10-*di*hydroxy- (Guyot and Staehling), 1906, A., i, 18.

**5-Phenyl-2-methyl-4:5:dihydro-1:2:4-oxadiazole** and its 4-acetyl and 4-benzoyl derivatives (Stollé), 1904, A., i, 102.

**5-Phenyl-2-methyl-4:5-dihydro-1:3:4-oxadiazole** and its 4-acetyl and 4-benzoyl derivatives (Stollé and Münch), 1905, A., i, 95.

**2-Phenyl-5-methyl-4:5-dihydro-oxazole**, *o*-hydroxy-, and its additive salts (Diels and Beccard), 1907, A., i, 57.

**2-Phenyl-2-methyldihydroperimidine** (Sachs), 1909, A., i, 433.

*N*-**Phenyl-*α*-methyldihydrophenanthraphenazine** (Freund and Richard), 1909, A., i, 418.

**6-Phenyl-3-methyldihydropyrazoquinazolone** (Michaelis, Krug, Leo, and Ziesel), 1910, A., i, 514.

5-**Phenyl-2-methyl-$\Delta^{2:5}$-dihydropyridazine-1-carbon-amide-** and **-anilide-3-carboxylic acids** and their ethyl esters (Borsche and Spannagel), 1904, A., i, 779.

6-**Phenyl-3-methyl-4:5-dihydropyridazine-4-carboxylic acid**, ethyl ester (Bülow and Filchner), 1908, A., i, 579.

**2:4- and 4:2-Phenylmethyldihydro-6-pyridones**, 5-cyano- (Issoglio), 1905, A., i, 610.

**2-Phenyl-5-methyl-1:2-dihydropyridone**, 3-hydroxy- (Bland and Thorpe), 1912, T., 868.

**1-Phenyl-2-methyl-4:5-dihydropyrrole** salts (Markwalder), 1907, A., i, 637.

**3-Phenyl-2-methyl-3:4-dihydroquinazoline**, 6-*p*-*di*nitro-, and its salts and sulphoacetate (Stillich), 1903, A., i, 864.

sulphoacetate, acetylsulphate, and ethyl sulphate of (Stillich), 1905, A., i, 318.

**3-Phenyl-2-methyldihydro-4-quinazolone** and its hydrochloride (Anschütz, Schmidt, and Greiffenberg), 1903, A., i, 57.

ethiodide and methiodide (Bogert and Geiger), 1912, A., i, 511.

**3-Phenyl-2-methyldihydro-4-quinazolone**, 3-*p*-cyano- (Bogert and Beal), 1912, A., i, 393.

3-*p*-nitro-, *di*nitro-, and nitro-3-*p*-nitro- (Bogert and Geiger), 1912, A., i, 396.

5-nitro- (Bogert and Chambers), 1905, A., i, 613.

6-nitro- (Bogert and Cook), 1906, A., i, 988.

**2-Phenyl-7-methyldihydro-4-quinazolone** and its *m*- and *p*-nitro-derivatives (Bogert and Hoffman), 1905, A., i, 891.

**2-Phenyl-1-methyldihydroquinoline** and its 3-(or 4-)bromo-, methobromide of (Freund and Speyer), 1905, A., i, 156.

**1-Phenyl-2-methyl-1:2-dihydro*iso*quinoline** and its platinichloride (Freund and Bode), 1909, A., i, 516.

**4-Phenyl-5-methyldihydro-3-thiouracil** (Posner and Stirnus), 1912, A., i, 456.

**1-Phenyl-2-methyl-2:3-dihydro-1:2:4-triazoles**, 3- and 5-, 5- and 3-aminothiol- (Fromm and Schneider), 1906, A., i, 715.

**4-Phenyl-4-** and **-5-methyldihydrouracils** (Posner and Stirnus), 1912, A., i, 456.

*p*-**Phenylmethyldi-*o*-hydroxybenzilosazone** and its tetra-acetyl derivative and labile isomeride (Biltz and Sieden), 1903, A., i, 121.

**Phenyl methyl diketone** (*benzoylacetyl*) and its dioxime (Borsche), 1907, A., i, 326.

refraction of (Smedley), 1909, T., 218; P., 17.

**Phenyl methyl diketone**, *p*-bromo-, and its phenylhydrazone and dioxime (Kohler), 1909, A., i, 394.

**Phenylmethyldiketone*mono*-acetylhydrazone** and **-semicarbazone** (Diels and vom Dorp), 1903, A., i, 862.

**Phenylmethyldimethylaminomethylcarbinol** and its benzoate (Fourneau), 1904, A., i, 378.

**Phenylmethyldi-methyl-** and **-ethylaminomethylcarbinols** (Tiffeneau), 1907, A., i, 305.

**3-Phenyl-1-methyldioxindole**, methyl ether (Kohn and Ostersetzer), 1912, A., i, 51.

**2-Phenyl-4-methylene-1:4-benzopyran**, 7:*op*-*tri*hydroxy-. See Resacetein.

**2-Phenyl-4-methylene-1:4-benzopyranol**, 7:*op*-*tri*hydroxy- (Bülow), 1903, A., i, 357.

synthesis of, and its diethyl ether and its additive salts, 8-nitroso-, and triacetate (Bülow and Sautermeister), 1904, A., i, 262.

*tetra*hydroxy- (Bülow and Sautermeister), 1905, A., i, 150.

**3-Phenyl-5-methylenedioxybenzylidenerhodanic acid** (Andreasch and Zipser), 1903, A., i, 856.

α-**Phenyl-3:4-methylenedioxycinnamic acid** (Bodroux), 1911, A., i, 783.

**5-Phenyl-7-*mp*-methylenedioxyphenyl-2:3-dihydro-4-pyrindene**, salts of (Striegler), 1912, A., i, 782.

**1-Phenyl-3-*mp*-methylenedioxyphenyl-7-methyloctahydroindenes**, 1:9-*di*hydroxy- (Striegler), 1912, A., i, 784.

**6-Phenyl-4-*p*-methylenedioxyphenyl-2-methylpyridine**, 3-cyano- (v. Meyer and Irmscher), 1908, A., i, 911.

**2-Phenyl-4-*mp*-methylenedioxyphenyl-7-methyl-5:6:7:8-tetrahydroquinoline** and its picrate (Striegler), 1912, A., i, 784.

β-**Phenyl-**β-**3:4-methylenedioxyphenylpropionic acid** and its salts (Fosse), 1907, A., i, 136.

**6-Phenyl-4-methylenedioxyphenyl-2-*p*-tolylpyridine**, 3-cyano- (v. Meyer and Irmscher), 1908, A., i, 912.

**Phenylmethylethylallylammonium** salts (Wedekind), 1904, A., i, 37.

**Phenylmethyl-ethyl-, -*n*-** and **-*iso*propyl-, -*iso*butyl-,** and **-*iso*amyl-allylammonium salts**, *p*-bromo-, effect of constitution on the rotatory power of (Jones and Hill), 1908, T., 295; P., 28.

**Phenylmethyl-ethyl-** and **-*iso*propylallylammonium iodides** (Hill), 1907, A., i, 692.

*dl*-**2-Phenyl-6-methyl-1-ethyl-1-allylpiperidinium** iodide and other salts (Scholtz), 1910, A., i, 634.

**Phenylmethylethylammonium** salts, hydroxy-, optically active (Meisenheimer), 1909, A., i, 20.

*d*-tartrate, hydroxy- (Meisenheimer), 1912, A., i, 25.

**1-Phenyl-2-methyl-3-ethylbenziminazolium** hydroxide, 4:7-*di*nitro-6-hydroxy-, and its salts (Meldola and Kuntzen), 1911, T., 1297.

**1-Phenyl-2-methyl-3-ethylbenziminazolol,** 4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 1299.

**1-Phenyl-3-methyl-2-ethyl-2-benziminazolol,** 4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 2042.

**1-Phenyl-2-methyl-3-ethylbenziminazolone,** 4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 1298.

**1-Phenyl-3-methyl-2-ethyl-6-benziminazolone,** 4:7-*di*nitro- (Meldola and Kuntzen), 1911, T., 2041.

**Phenylmethylethyl-butyl-,***iso***butyl-,** and *iso***propyl-ammonium** iodides (Fröhlich), 1909, A., i, 376.

**Phenylmethylethylcarbinol** and its chloride (Klages and Hahn), 1903, A., i, 19.

**Phenylmethylethyldihydroacridine** (Freund and Speyer), 1905, A., i, 157.

**2-Phenyl-5-methyl-6-ethyl-1:2-dihydropyridone,** 3-hydroxy- (Bland and Thorpe), 1912, T., 1570.

*s*-**Phenylmethylethylene.** See α-Phenylpropylene.

**Phenylmethylethylene oxide** and its conversion into hydratropaldehyde (Klages; Tiffeneau), 1905, A., i, 523.

**Phenylmethylethyl-(ethylanilinoethyl)-ammonium** iodide (Wedekind and Meyer), 1909, A., i, 186.

**Phenylmethylethylmethane,** *di-p*-hydroxy-, and its diacyl derivatives, and the action of bromine on (Zincke and Goldemann), 1908, A., i, 780.

**Phenylmethylethylmorpholonedimethylammonium** bromide and hydroxide (Fourneau), 1909, A., i, 50.

**Phenylmethylethylphosphine** oxide (Meisenheimer and Lichtenstadt), 1911, A., i, 344.

**2-Phenyl-6-methyl-1-ethylpiperidines,** *d*- and *l*- (Scholtz and Wassermann), 1907, A., i, 341.

**Phenylmethylethylpropylsilicane,** preparation of (Kipping), 1907, T., 221.

**1-Phenyl-3-methyl-2-ethylpyrazole,** 2:5-thio-. See Ethylthiopyrine.

**1-Phenyl-3-methyl-4-ethylpyrazole** and its salts (Stoermer and Martinsen), 1907, A., i, 446.

**1-Phenyl-5-methyl-4-ethylpyrazole,** 3-chloro-, and 3-iodo-, methiodide of (Michaelis and Drews), 1907, A., i, 158.

**1-Phenyl-3-methyl-2-ethylpyrazolone** (*homoantipyrine*), thio-derivatives of (v. Konek-Norwall), 1911, A., i, 505.

**1-Phenyl-4-methyl-3-ethylpyrazolone** (Emmerling and Kristeller), 1906, A., i, 623.

**1-Phenyl-5-methyl-4-ethyl-3-pyrazolone** and its benzenesulphonyl derivative (Michaelis and Drews), 1907, A., i, 158.

**1-Phenyl-3-methyl-4-ethyl-5-pyrazolone,** *p*-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 340.

**Phenylmethylethylsilicol** (Kipping and Hackford), 1911, T., 141; P., 9.

**1-Phenyl-2-methyl-4-ethylurazole** (Acree), 1907, A., i, 798; (Nirdlinger, Acree, and Heaps), 1910, A., i, 342.

**1-Phenyl-4-methyl-2-ethylurazole** (Brunel and Acree), 1910, A., i, 521.

**9-Phenyl-2-methylfluorone** (Pope and Howard), 1910, T., 1026.

**2-Phenyl-5-methylfuran** (Borsche and Fels), 1906, A., i, 509.

**β-Phenyl-α-methylglycidic acid,** ethyl ester (Darzens), 1906, A., i, 137.

**β-Phenyl-β-methylglycidic acid** and its esters, amides, and salts (Claisen), 1905, A., i, 287.

*d*-**β-Phenyl-β-methylglycidic acid,** sodium salt (Wootton), 1910, T., 409; P., 44.

**Phenylmethylglycinamide** and *p*-nitroso- (Warunis and Sachs), 1904, A., i, 669.

**Phenylmethylglycollic acid.** See α-Phenylpropionic acid, α-hydroxy-.

**Phenylmethylglyoxime** *per*oxide (Borsche), 1907, A., i, 326.

**Phenylmethylglyoxime,** 4:4-*di*hydroxy-, preparation of (Chemische Fabrik auf Aktien vorm. E. Schering), 1908, A., i, 657.

**α-Phenyl-ζ-methyl-$\Delta^{\alpha\gamma}$-heptadiene** and its optical behaviour (Klages), 1907, A., i, 500.

**γ-Phenyl-ζ-methylheptan-ε-one** and its oxime (KOHLER), 1907, A., i, 1052.

**α-Phenyl-ε-methyl-$\Delta^{\alpha\gamma}$-hexadiene** and its optical behaviour (KLAGES), 1907, A., i, 500.

**3-Phenyl-1-methyl*cyclo*hexane** (KURSANOFF), 1907, A., i, 600.

**3-Phenyl-1-methyl*cyclo*hexan-3-ol** and its phenylurethane (MAILHE and MURAT), 1911, A., i, 127.

**4-Phenyl-1-methyl*cyclo*hexan-4-ol** and its phenylcarbamate (SABATIER and MAILHE), 1906, A., i, 254.

**α-Phenyl-ε-methylhexan-γ-one** (SENDERENS), 1911, A., i, 303.

**2-Phenyl-4-methyl*cyclo*hexan-6-onedicarboxylic acid**, *m*-nitro-4-hydroxy-, esters of the tautomeric forms of (RABE and BILLMANN), 1904, A., i, 750.

**β-Phenyl-β-4-methyl*cyclo*hexan-2-onylpropiophenone** and its derivatives (ROSENBURG), 1912, A., i, 782.

**3-Phenyl-1-methyl*cyclo*hexene** (MAILHE and MURAT), 1911, A., i, 127.

**2-Phenyl-1-methyl-$\Delta^2$-*cyclo*hexene** (MURAT), 1909, A., i, 147.

**α-Phenyl-1-methyl-$\Delta^3$-*cyclo*hexene-4-acetonitrile** (HARDING and HAWORTH), 1910, T., 498.

**3-Phenyl-1-methyl-$\Delta^6$-*cyclo*hexen-5-one-2-carboxylic acid**, ethyl ester, and its semicarbazone (RABE and SPENCE), 1906, A., i, 89.

**6-Phenyl-2-methyl-$\Delta^1$-** and **-$\Delta^2$-*cyclo*hexen-4-one-1-carboxylic acids**, methyl esters, and their derivatives (DIECKMANN), 1912, A., i, 856.

**α-Phenyl-ε-methyl-$\Delta^\alpha$-hexinen-γ-ol** (BRACHIN), 1907, A., i, 129.

**ζ-Phenyl-β-methylhexyl alcohol** (v. BRAUN, DEUTSCH, and SCHMATLOCH), 1912, A., i, 434.

**4-Phenyl-1-** and **-3-methylhydantoins** and 4-hydroxy- (GABRIEL), 1907, A., i, 91.

*s*-**Phenylmethylhydrazine** and its oxalate (KNORR), 1906, A., i, 893.
  from phenylpyrazole, and salts of (KNORR and WEIDEL), 1909, A., i, 965.
  picrazide (KNORR and WEIDEL), 1909, A., i, 965.
  thiocyanoacetate (FRERICHS and FÖRSTER), 1910, A., i, 192.

**Phenylmethylhydrazinopyrine** and its salts and derivatives (MICHAELIS and KOBERT), 1909, A., i, 680.

**Phenylmethylhydroxyethylamine**, ethylene oxide from the quaternary base of (RABE and HALLENSLEBEN), 1910, A., i, 841.

**1-Phenyl-2-methyl-3-hydroxymethyl-4-ethyl-5-pyrazolone** (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1909, A., i, 257.

**1-Phenyl-2-methyl-3-hydroxymethyl-4-ethyl-5-pyrazolone**, *p*-amino-, and *p*-nitro- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1910, A., i, 340.

**1-Phenyl-3-methyl-5-hydroxymethylpyrazole** (BENARY), 1910, A., i, 435.

**1-Phenyl-3-methyl-5-hydroxymethylpyrazole-4-carboxylic acid** and its lactone (BENARY), 1910, A., i, 434.

**1-Phenyl-2-methyl-3-hydroxymethyl-5-pyrazolone**, *p*-amino-, and *p*-nitro- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1910, A., i, 340.

*s*-*C*-**Phenyl-*C*-methyliminodiacetic acid** and its hydrochloride, nitrile hydrochloride, and diethyl ester (STADNIKOFF), 1909, A., i, 106.

**2-Phenyl-3-methyl*iso*indolinone**, 3-hydroxy- (BÉIS), 1906, A., i, 884.

**Phenylmethylitaconic acid**, ethyl and methyl esters (STOBBE and ROSE), 1911, A., i, 375.

**Phenylmethyl*iso*itaconic acid**, ethyl ester, preparation of (STOBBE and GADEMANN), 1911, A., i, 375.

**Phenylmethylitaconic acids**, isomeric, configuration of the (STOBBE and ROSE), 1904, A., i, 503.

**Phenylmethylketazine**, *m*-amino-, and *m*-nitro- (KNÖPFER), 1909, A., i, 188.

**Phenylmethylketen** and its derivatives (STAUDINGER and RUŽIČKA), 1911, A., i, 462.

**Phenylmethylketenquinoline** (STAUDINGER and RUŽIČKA), 1911, A., i, 464.

**3-Phenyl-6-methylkynurine** and its *O*-methyl and -ethyl ethers (MEYER), 1907, A., i, 241.

**Phenylmethylmalononitrile** (HESSLER), 1908, A., i, 182.

**Phenylmethylmalonyl chloride** (STAUDINGER and RUŽIČKA), 1911, A., i, 462.

**Phenyl methyl mercaptole**, *p*-amino-, and its acetyl derivative (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), 1912, A., i, 183.
  and its salts and acetyl and halogen derivatives (ZINCKE and JÖRG), 1909, A., i, 790.

**Phenylmethylmethenylamidine**, 2:4:5-*tri*chloro- (BADISCHE ANILIN- & SODA-FABRIK), 1907, A., i, 444.

**1-Phenyl-3-methyl-5-methylthiolpyrazole.** See ψ-Thiopyrine.

**1-Phenyl-3-methyl-4-methylurethano-5-pyrazolone** and its methyl carbonate and **-5-pyrazolonylacetic acid**, methyl ester (Farbwerke vorm. Meister, Lucius, & Brüning), 1908, A., i, 472.

**5-Phenyl-2-methylnaphthaphenazonium** ferrichloride, and 6-amino-, and 3:6-*di*amino-, salts and derivatives of (Orloff), 1910, A., i, 783.

**2-Phenyl-3-methyl-β-naphthaquinoline** and its nitrate (Borsche), 1909, A., i, 956.

**2-Phenyl-3-methyl-β-naphthaquinoline-1-carboxylic acid** (Borsche), 1909, A., i, 956.

**Phenylmethylnitroamine**, 3:4-*di*-bromo- and -chloro-2:6-*di*nitro- (Blanksma), 1903, A., i, 333.
  2:4:6-*tri*nitro- (Jaeger), 1906, A., i, 15.
    action of bases, ammonia, and amines on (van Romburgh and Maurenbrecher), 1907, A., i, 512.

**Phenylmethylnitromethane** (Bamberger and Seligman), 1903, A., i, 100.

**Phenylmethylnitro*iso*oxazole** (Wieland), 1904, A., i, 56.

**Phenylmethylnitrosoamine**, *op*-*di*bromo- (Fischer and Gross), 1912, A., i, 439.
  *m*-chloro- (Fischer and Neber), 1912, A., i, 438.

**δ-Phenyl-γ-methyloctan-ζ-one** and its oxime (Kohler), 1907, A., i, 1052.

**6-Phenyl-4-methyl-1:2:5-oxadiazine**, 4-hydroxy-, and its hydrochloride and methiodide (Diels and Sasse), 1907, A., i, 1086.

**2-Phenyl-5-methyl-1:3:4-oxadiazole** and its derivatives (Stollé, Mampel, Holzapfel, and Leverkus), 1912, A., i, 226.

**Phenylmethyloxamic acid**, methyl ester (Lander), 1904, T., 989 ; P., 132.

**2-Phenyl-5-methyloxazole** and its derivatives (Gabriel), 1910, A., i, 432.

**5-Phenyl-2-methyloxazole** and its chromate (Gabriel), 1910, A., i, 431.

**5-Phenyl-3-methyl*iso*oxazole** (Moureu and Brachin), 1904, A., i, 95.

**3-Phenyl-5-methyl*iso*oxazole** (Claisen), 1907, A., i, 941.

**5-Phenyl-3-methyl*iso*oxazole-4-azobenzene-*p*-azoacetoacetic acid**, ethyl ester (Bülow and Busse), 1906, A., i, 717.

**5-Phenyl-3-methyl*iso*oxazole-4-azobenzene-*p*-4′-azo-1′-phenyl-3′-methyl-5′-pyrazolone** (Bülow and Busse), 1906 A., i, 718.

**3-Phenyl-5-methyl*iso*oxazole-4-carboxylic acid** and its ethyl ester (Benary), 1909, A., i, 890.

**Phenylmethyl*iso*oxazolone** (Haller and Bauer), 1911, A., i, 568.

**α-Phenyl-β-methyl-$\Delta^{\alpha\gamma}$-pentadiene** (Bjelouss), 1912, A., i, 230.

**3-Phenyl-1-methyl*cyclo*pentadiene** (Borsche and Menz), 1908, A., i, 149.

***as*-Phenylmethylpentamethylenediamine** (v. Braun), 1910, A., i, 820.

**α-Phenyl-β-methylpentane** (Bjelouss), 1912, A., i, 230.

**β-Phenyl-β-methylpentane** (Schreiner), 1910, A., i, 661.

**α-Phenyl-γ-methylpentane.** See Hexylbenzene.

**γ-Phenyl-γ-methylpentane** (Schreiner), 1910, A., i, 661.

**3-Phenyl-1-methyl*cyclo*pentane** (Borsche and Menz), 1908, A., i, 149 ; (Gustavson), 1908, A., i, 328.

**α-Phenyl-β-methylpentane-αγ-diol** and its diacetate (Franke, Kohn, and Zwiauer), 1907, A., i, 172.

**β-Phenyl-γ-methylpentan-β-ol** (Bodroux and Taboury), 1909, A., i, 546.

**α-Phenyl-δ-methylpentan-β-one** and its phenylhydrazone and semicarbazone (Senderens), 1910, A., i, 489.

**α-Phenyl-δ-methylpentan-γ-one** and its semicarbazone (Senderens), 1911, A., i, 303.

**α-Phenyl-γ-methyl-$\Delta^{\alpha}$-pentene.** See Methylpentenylbenzene.

**α-Phenyl-γ-methyl-$\Delta^{\beta}$-pentene** and its nitrosochloride (Klages), 1904, A., i, 569.
  and its nitrosylchloride and -$\Delta^{\alpha\gamma}$-**pentadiene** (Klages, Gieser, and Lauck), 1906, A., i, 662.

**α-Phenyl-γ-methyl-$\Delta^{\alpha}$-penten-γ-ol** (Klages, Gieser, and Lauck), 1906, A., i, 662.

**5-Phenyl-2-methylphenazonium**, 3:6-*di*amino-, salts and derivatives of (Schaposchnikoff and Orloff), 1910, A., i, 783.

**7-Phenyl-9-methylpheno-αβ-naphthacridine**, 10-hydroxy-, and its hydrochloride (Ullmann and Fitzenkam), 1906, A., i, 45.

**12-Phenyl-10-methylpheno-αβ-naphthacridine**, 9- and *p*-*di*amino-, and their acetyl derivatives and their salts (Ullmann and Grether), 1903, A., i, 447.

**Phenyl-*p*′-methylphenylformazylcarboxylic acid**, *p*-bromo- and *p*-chloro-, menthyl esters (Lapworth), 1903, T., 1126 ; P., 149.

**Phenylmethylphosphinic acid**, alkaloidal salts of (Pope and Gibson), 1912, T., 740; P., 109.

**Phenylmethylpiperidinium** bromide (v. Braun), 1908, A., i, 678.
iodide (v. Braun), 1907, A., i, 960.

**α-Phenyl-β-methyl-propaldehyde** and its semicarbazone and **-propane-αβ-diol** (Tiffeneau and Dorlencourt), 1907, A., i, 131.

**2-Phenyl-1-methyl*cyclo*propane** (Kijner), 1912, A., i, 758.

**α-Phenyl-α-methylpropene**, β-bromo- (Hell and Bauer), 1904, A., i, 242.

**1-Phenyl-5-methyl-2-*iso*propenyl*cyclo*hexane** (Klages and Sautter), 1906, A., i, 490.

**Phenyl α-methylpropenyl ketone** and its *p*-nitrophenylhydrazone (Blaise and Herman), 1911, A., i, 881.

**α-Phenyl-α-methylpropionic acid** (*phenyldimethylacetic acid*), liberation of carbon monoxide from (Bistrzycki and Mauron), 1907, A., i, 1039.

**β-Phenyl-α-methylpropionic acid.** See β-Phenyl*iso*butyric acid

**γ-Phenyl-α-methylpropyl alcohol**, *o*-hydroxy-, and its urethanes (Stoermer and Schäffer), 1903, A., i, 847.

**Phenylmethyl*iso*propylcarbinol** and its chloride (Klages), 1904, A., i, 27.

*r*- and *l*-**3-Phenyl-1-methyl-4-*iso*propyl-3-*cyclo*hexanol** (Murat), 1911, A., i, 890.

**3-Phenyl-1-methyl-4-*iso*propyl*cyclo*hexene** (Murat), 1911, A., i, 890.

**6-Phenyl-2-methyl-1-propylpiperidine** (Scholtz), 1910, A., i, 634.

**1-Phenyl-4-methyl-3-propylpyrazolone** (Bouveault and Bongert), 1903, A., i, 144.

**1-Phenyl-2-methyl-4-propylurazole** (Nirdlinger, Acree, and Heaps), 1910, A., i, 342.

**α-Phenyl-γ-methyl-α-propylvaleramide** (Bodroux and Taboury), 1910, A., i, 557.

**α-Phenyl-γ-methyl-α-*iso*propylvaleronitrile** (Bodroux and Taboury), 1910, A., i, 482.

**3-Phenyl-1-methylpyrazole**, halogen derivatives, and their salts (Michaelis and Dorn), 1907, A., i, 247.

**5-Phenyl-1-methylpyrazole**, 3-chloro- (Michaelis and Dorn), 1907, A., i, 247.

**1-Phenyl-3-methylpyrazole**, 5-amino-, and its derivatives (Michaelis and Brust), 1905, A., i, 477; (Mohr), 1909, A., i, 190.

**1-Phenyl-3-methylpyrazole**, 4:5-*di*amino-, and its diacetyl derivative and hydrochloride (Michaelis and Klopstock), 1907, A., i, 735.
4-amino-5-hydroxy-, and its derivatives (Auwers, Dannehl, and Boennecke), 1911, A., i, 170.
5-bromo- and 5-iodo-, and their additive products (Michaelis, Moeller, and Kober), 1904, A., i, 781.
5-chloro-, and its alkyl haloids (Mayer), 1903, A., i, 370.
5-chloro-4-amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 940; (Michaelis, Leonhardt, and Wahle), 1905, A., i, 392.
5-chloro-1-*o*-, *m*-, and *p*-nitro-, methiodides, and 5-chloro-4-nitro-1-*p*-nitro- (Michaelis, Graff, Gesing, and Boie), 1911, A., i, 232.

**5-Phenyl-3-methylpyrazole** (Moureu and Brachin), 1903, A., i, 581.

**5-Phenyl-3-methylpyrazole**, 4-nitroso- (Wolff, Bock, Lorentz, and Trappe), 1903, A., i, 210.
and its 1-carbamyl derivative (Sachs and Alsleben), 1907, A., i, 358.

**1-Phenyl-5-methylpyrazole** and its salts (Stoermer and Martinsen), 1907, A., i, 446.
preparation of, and its additive salts (Stoermer), 1907, A., i, 252.

**1-Phenyl-5-methylpyrazole**, 4-amino-3-hydroxy-, benzyl and benzenesulphonyl derivatives of (Michaelis and Kotelmann), 1907, A., i, 155.
3-*mono*- and 3:5-*di*-chloro- and 3-chloro-4-bromo-, and the alkyl haloids of the 3-chloro-compound (Michaelis and Meyer), 1905, A., i, 378.
3-chloro-*m*-amino-, 3-chloro-*p*-bromo-, and 3-chloro-*m*-nitro-, and their derivatives (Michaelis and Stiegler), 1908, A., i, 211.

**3-Phenyl-5-methylpyrazole**, *s*-*di*nitro- (Berend and Heymann), 1904, A., i, 670.

**1-Phenyl-3-methylpyrazole-4-azobenzene** and 5-chloro- (Michaelis and Leonhardt), 1904, A., i, 124; (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 940.
and its 5-chloro-, 5-iodo-, 5-thio-, 5-thioalkyl-, and 5-alkylsulphone derivatives, and 5-*mono*- and *di*-sulphides (Michaelis, Leonhardt, and Wahle), 1905, A., i, 392.

**1-Phenyl-3-methylpyrazole-4-azobenzene**, 5-amino-, and its additive compounds (Michaelis and Klopstock), 1907, A., i, 736.

**1-Phenyl-5-methylpyrazole-4-azobenzene**, 3-chloro- (Michaelis and Behrens), 1905, A., i, 396.

**1-Phenyl-3-methylpyrazole-4-azobenzene-4′-*p*-azosalicylic acid**, 5-hydroxy-, and 5-hydroxy-1-*o:p-di*nitro- (Bülow and Haas), 1911, A., i, 339, 340.

**1-Phenyl-2-methyl-pyrazole-4-azo-*p*-phenetole**, 5-chloro-, and **-pyrazolone-4-azo-*p*-phenetole** (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 940.

**1-Phenyl-3-methyl-pyrazole-4-azo-*o*-toluene**, 5-chloro-, and **-pyrazolone-4-azo-*o*-toluene** (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 940.

**1-Phenyl-3-methylpyrazole-*o*- and -*p*-azotoluenes** and their 5-chloro- and 5-thio-derivatives (Michaelis, Leonhardt, and Wahle), 1905, A., i, 394.

**1-Phenyl-3-methylpyrazole-2′-carboxylic acid**, 4-bromo-, and its silver salt and ethyl ester (Michaelis and Käding), 1910, A., i, 517.
  5-chloro-, and its salts and ethyl ester, and anhydride (Michaelis and Eisenschmidt), 1904, A., i, 624.

**1-Phenyl-3-methylpyrazole-3′-carboxylic acid**, 5-chloro- (Michaelis and Horn), 1910, A., i, 517.

**1-Phenyl-5-methylpyrazole-4-carboxylic acid**, anilide, *p*-toluidide, and α- and β-naphthylamides of (Dains and Brown), 1909, A., i, 783.

**1-Phenyl-5-methylpyrazole-2′-carboxylic acid**, 3-chloro-, and its ethyl ester, and barium and silver salts (Michaelis and Käding), 1910, A., i, 516.

**1-Phenyl-3-methylpyrazole-4:2′-dicarboxylic acid**, 5-chloro- (Michaelis and Leo), 1910, A., i, 515.

**1-Phenyl-3-methylpyrazole-5-oxyacetic acid**, 4-amino-, eso-anhydride of, and its *N*-methyl derivative (Farbwerke vorm. Meister, Lucius, & Brüning), 1908, A., i, 472.

**1-Phenyl-3-methylpyrazole-5-sulphonic acid** and its salts, amide, anilide, and chloride, and 4-bromo- (Michaelis and Pander), 1908, A., i, 689.

**1-Phenyl-3-methyl-5-pyrazolidone** (Prentice), 1904, T., 1669; P., 220.

**1-Phenyl-3-methyl-5-pyrazolidone-3-carboxylic acid** and its phenylhydrazide (Fichter and Füeg), 1907, A., i, 83.

**1-Phenyl-3-methylpyrazoline** (Maire), 1908, A., i, 291.

**5-Phenyl-3-methylpyrazoline** and its hydrochloride (Kijner), 1912, A., i, 758.

**Phenylmethylpyrazolone**, azo-compounds of (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 538.

**Phenylmethylpyrazolone**, *di*nitro-. See Picrolonic acid.

**1-Phenyl-3-methylpyrazolone**, 4-oximino-, benzoyl and *m*-nitrobenzoyl derivatives of (Dimroth and Dienstbach), 1909, A., i, 63.

**1-Phenyl-4-methyl-3-pyrazolone**, *p*-bromo- and *p*-nitro- (Fichter and Vortisch), 1907, A., i, 82.

**1-Phenyl-5-methyl-3-pyrazolone** (Mayer), 1903, A., i, 370.
  and its salts, benzoyl, aldehydic, and 4-bromo- and 4-chloro-derivatives (Michaelis and Meyer), 1905, A., i, 377.

**1-Phenyl-5-methyl-3-pyrazolone**, 4-amino-, and its salts, acyl derivatives, and compounds with aldehydes, ketones, and pyruvic acid, 4-iodo-, 4-nitro-, and 4-nitroso- (Michaelis and Kotelmann), 1907, A., i, 154.
  *p*-bromo-, and its diazo-chloride and 4-amino-, 4-bromo-, 4-chloro-, 4-iodo-, 4-nitro-, and 4-nitroso-derivatives and their derivatives (Michaelis and Stiegler), 1908, A., i, 210.
  *m*-nitro-, and its 4-bromo-, 4-chloro-, and 4-iodo-derivatives (Michaelis and Stiegler), 1908, A., i, 212.
  4-nitroso- (Michaelis), 1905, A., i, 244.

**1-Phenyl-3-methyl-5-pyrazolone** and *p*-nitro- (Feist), 1906, A., i, 332.
  oxidation of, in presence of benzaldehyde, and its compound with hydrobenzamide (Betti), 1906, A., i, 985.
  condensation product of (Mohr), 1905, A., i, 676.
  condensation of, with ethyl acetoacetate (Stollé), 1905, A., i, 838; 1906, A., i, 48.
  condensation product of phenylazoimide with, constitution, and derivatives of (Heiduschka and Rothacker), 1909, A., i, 851.

**1-Phenyl-3-methyl-5-pyrazolone,** compound of trinitrobenzene and (Sudborough and Beard), 1910, T., 797.

azomethine derivative of (Sachs and Kraft), 1903, A., i, 335.

**1-Phenyl-3-methyl-5-pyrazolone,** 4-bromo-4-nitro-1-*p*-bromo- (Wislicenus and Göz), 1912, A., i, 52.

*p*-chloro-, and its methiodide (Michaelis, Thomas, and Isert), 1911, A., i, 1042.

3′:5′-*di*chloro-2′-hydroxy- (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1023.

4-nitro-, salts of (Hantzsch), 1907, A., i, 556.

4-*iso*nitroso- (Fichter and Füeg), 1907, A., i, 83.

5-thio-, and its derivatives (Michaelis and Pander), 1904, A., i, 780; 1908, A., i, 689.

**1-Phenyl-4-methyl-5-pyrazolone** and its isomeride (Michael), 1905, A., i, 564; (Stolz), 1905, A., i, 942.

**3-Phenyl-1-methyl-5-pyrazolone,** preparation of, and its derivatives (Michaelis, Rassmann, Dorn, v. der Hagen, and Wrede), 1907, A., i, 246.

**3-Phenyl-1-methyl-5-pyrazolone,** 4-amino-, and its aldehydic derivatives (Michaelis and Wrede), 1907, A., i, 250.

**1-Phenyl-3- and -4-methylpyrazolones,** iodo-derivatives (Fichter and Philipp), 1907, A., i, 84.

**1-Phenyl-3-methyl-5-pyrazolone-4-aldehyde** and its silver salt, phenylhydrazone, aldazine, and azomethine derivative (Felix and Friedländer), 1910, A., i, 280.

**1-Phenyl-3-methyl-5-pyrazolone-4-azobenzene,** Knorr's, constitution of (Eibner), 1903, A., i, 871.

bromo-derivatives (Eibner and Laue), 1906, A., i, 613.

**1-Phenyl-5-methyl-3-pyrazolone-4-azobenzene** and its salts and benzenesulphonyl derivative (Michaelis and Behrens), 1905, A., i, 396.

**1-Phenyl-3-methyl-5-pyrazolone-4-azobenzene-*p*-4′-azobenzoylacetic acid,** ethyl ester (Bülow and Busse), 1907, A., i, 166.

**1-Phenyl-3-methyl-5-pyrazolone-4-azobenzene-*p*-4′-azobenzoylacetone** (Bülow and Busse), 1906, A., i, 718.

**1-Phenyl-3-methyl-5-pyrazolone-*o*-** and **-*p*-azotoluenes** (Michaelis, Leonhardt, and Wahle), 1905, A., i, 394.

**1-Phenyl-5-methyl-3-pyrazolone-2′-carboxylic acid** and its derivatives (Michaelis and Käding), 1910, A., i, 516.

**1-Phenyl-3-methyl-5-pyrazolone-2′-carboxylic acid** (Michaelis and Eisenschmidt), 1904, A., i, 624.

and 4-bromo-, and 4-oximino- (Michaelis, Krug, Leo, and Ziesel), 1910, A., i, 514.

**1-Phenyl-3-methyl-5-pyrazolone-3′-carboxylic acid** and its esters and 4:4-*di*chloro-, and 4-oximino- (Michaelis and Horn), 1910, A., i, 517.

**1-Phenyl-3-methyl-5-pyrazolone-4′-carboxylic acid,** and its derivatives (Michaelis and Horn), 1910, A., i, 517.

**1-Phenyl-3-methyl-5-pyrazolone-4-phenylhydrazone** (Bouveault and Wahl), 1904, A., i, 790.

and *p*′-nitro- (Wahl), 1905, A., i, 474.

**1-Phenyl-3-methyl-5-pyrazolonylacetic acid,** 4-amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1908, A., i, 472.

**1-Phenyl-2-methyl-3:4-pyrazopyrazol-5-one** and its acetyl derivative (Stolz), 1909, A., i, 71.

**1-Phenyl-3-methyl-4:5-pyrazoquinone,** 5-imino- (Mohr), 1909, A., i, 191.

**1-Phenyl-3-methyl-4:5-pyrazoquinonedioxime** anhydride (Mohr), 1909, A., i, 191.

**Phenylmethylpyrazylphenylmethylpyrazolone** (Mohr), 1905, A., i, 676; (Stollé), 1905, A., i, 839.

**6-Phenyl-3-methylpyridazine** and its additive salts (Paal and Dencks), 1903, A., i, 289.

**1-Phenyl-5-methylpyridazin-6-one-3-carboxylic acid** (Blaise and Gault), 1911, A., i, 520.

**4-Phenyl-2-methylpyridine** and its **5:6-dicarboxylic acid** and their salts (Bülow and Issler), 1903, A., i, 719.

**2-Phenyl-6-methylpyridine,** 3-cyano-4-hydroxy- and 4-hydroxy- (v. Meyer), 1905, A., i, 155.

**2-Phenyl-6-methyl-4-pyridone** and its salts (Ruhemann), 1908, T., 1284; P., 178.

**2-Phenyl-6-methyl-4-pyridone,** 3-cyano- (v. Meyer), 1905, A., i, 155; (v. Meyer and Irmscher), 1908, A., i, 911.

**1-Phenyl-6-methyl-2-pyridone-3:5-dicarboxylic acid** and its silver salt (Simonsen), 1908, T., 1032.

**α-Phenyl-δ-(6-methyl-4-pyridyl)-butadiene** and its salts (Proske), 1909, A., i, 413.

**2-Phenyl-6-methyl-4-pyrone** and its platinichloride (Ruhemann), 1908, T., 433 ; P., 52.

**Phenylmethylpyrrole,**3-nitroso-,trioxime of, and its benzoyl derivative (Angelico), 1905, A., i, 659.

**2-Phenyl-5-methylpyrrole-3-carboxylic acid,** ethyl ester (Borsche and Fels), 1906, A., i, 509.

**5-Phenyl-2-methylpyrrole-3- and -4-carboxylic acids** and their lactams (Borsche and Fels), 1907, A., i, 81.

**1-Phenyl-2-methylpyrrolidine** and its additive salts (Markwalder), 1907, A., i, 638.

**1-Phenyl-5-methylpyrrolidone,** formation of, by the simultaneous electrolytic reduction of lævulic acid and nitrobenzene (Emmert), 1907, A., i, 339.

**1-Phenyl-2-methylpyrrolidone-2-carboxylic acid,** *p*-bromo-, *p*-chloro-, and *p*-iodo-, and their amides and nitriles (Weber), 1907, A., i, 1071.

**3-Phenyl-2-methyl-4-quinazolone,** 6- and 7-amino-, acetyl derivatives (Bogert, Amend, and Chambers), 1910, A., i, 895.
  *m*- and *p*-amino-, *p*-6- and -7-, and *m*-7-*di*amino-, and *p*-amino-6-nitro-, and their acetyl derivatives (Bogert, Gortner, and Amend), 1911, A., i, 581.

**3-Phenyl-2-methyl-4-quinazolone-6-carboxylic acid,** 7-nitro- (Bogert and Kropff), 1909, A., i, 843.

**4-Phenyl-2-methylquinoline** (Bülow and Issler), 1903, A., i, 719.
  synthesis of (Spallino and Salimei), 1912, A., i, 723.

**4-Phenyl-2-methylquinoline,**7-hydroxy-, and its salts and ethoxy and benzoyl derivatives (Bülow and Issler), 1903, A., i, 718.

**2-Phenyl-4-methylquinoline,** *p*-amino-. See Flavaniline.

**3-Phenyl-6-methylquinoline,** 4-chloro- (Meyer), 1907, A., i, 242.

**3-Phenyl-8-methyl*iso*quinoline,** and its salts, and 1-chloro- (Müller), 1909, A., i, 160.

**2-Phenyl-6-methylquinoline-4-carboxylic acid,** ethylglycyl ester (Chemische Fabrik auf Aktien vorm. E. Schering), 1912, A., i, 1018.

**2-Phenyl-1-methylquinolinium** iodide, 4-chloro- (Kaufmann and Vonderwahl), 1912, A., i, 503.

**3-Phenyl-1-methyl-2-quinolone** (Hübner), 1908, A., i, 288.

**2-Phenyl-1-methylquinolylene-4(2′)-quinaldine** and its ethiodide and iodide (Kaufmann and Vonderwahl), 1912, A., i, 503.

**Phenyl methylstilbyl ketone** and its hydroxylamine derivative (Konowaloff and Finoguéeff), 1903, A., i, 264.

**Phenyl α-methylstyryl ketone** (*benzylidenepropiophenone*), condensation of, with acetophenone (Abell), 1903, T., 360 ; P., 17.

**Phenylmethylsulphone,** *o*-amino-, *o*-hydroxylamino- and *o*-nitro- (Claasz), 1912, A., i, 514.
  *p*-bromo- (Bourgeois and Abraham), 1912, A., i, 109.
  2:4-*di*nitro- (Claasz), 1912, A., i, 390.

**Phenylmethylsulphonium** dibromide (Bourgeois and Abraham), 1912, A., i, 109.

**Phenyl methyl sulphoxide,** *p*-amino-, acetyl derivative (Zincke and Jörg), 1909, A., i, 790.

**3-Phenyl-2-methyl-1:2:3:4-tetrahydroquinazoline,** 6-*p*-*di*nitro-2-hydroxy- (Stillich), 1903, A., i, 864.

**2-Phenyl-1-methyltetrahydroquinoline** (Freund and Speyer), 1905, A., i, 156.

**1-Phenyl-2-methyltetrahydro*iso*quinoline** and its methiodide (Freund and Bode), 1909, A., i, 516.

**δ-Phenyl-α-methyltetramethylenediamine.** See α-Phenylpentane, *αδ-di*amino-.

**1-Phenyl-4-methyl-1:2:3:5-tetrazole** (Dimroth and Merzbacher), 1910, A., i, 898.

**1-Phenyl-5-methyl-1:2:3:4-tetrazole,** and *p*-nitro- (Dimroth and de Montmollin), 1910, A., i, 899.

**1-Phenyl-5-methyl-1:2:3:4-tetrazole-sulphonic acid,** sodium and silver salts (Dimroth and de Montmollin), 1910, A., i, 899.

**1-Phenyl-3-methyltetronic acid** and its benzoyl derivative (Dimroth and Feuchter), 1903, A., i, 631.

**2-Phenyl-5-methylthiazole** and its platinichloride (Gabriel), 1910, A., i, 432.

**5-Phenyl-2-methylthiazole** and its derivatives (Gabriel), 1910, A., i, 431.

**Phenylmethyl-ψ-*di*thiobiurets** (Johnson and Bristol), 1903, A., i, 751.

**Phenylmethyl*di*thiocarbamic acid** and its esters (Heller and Michel), 1903, A., i, 477.

**Phenylmethyl*di*thio- and -thiol-carbamic acids**, phenyl esters (Rivier), 1907, A., i, 838.

**Phenylmethyl-ψ-thiocarbamide**, cyano-, and its ammonium derivative (Wheeler and Jamieson), 1903, A., i, 751.

**1-β-Phenylmethylthiocarbamido-2:5-dimethylpyrrole-3:4-dicarboxylic acid**, ethyl ester (Bülow and Sautermeister), 1906, A., i, 314.

**Phenylmethylthiocarbamylthioglycollic acid** and its derivatives (Holmberg and Psilanderhielm), 1910, A., i, 834.

**3-Phenyl-4-methyl-1:3:4-thiodiazolone-5-anil** (Busch and Limpach), 1911, A., i, 335.

**Phenyl methyl thioether.** See Phenyl methyl mercaptole.

**3-Phenyl-5-methyl-2-thiohydantoin**, 1-amino-, and its derivatives (Bailey, Acree, and Miller), 1904, A., i, 826.

**Phenylmethylthioncarbamic acid**, phenyl ester (Rivier), 1906, A i, 948.

**1-Phenyl-3-methyl-5-thionpyrazolone** and its 4:4-diethyl derivative (Stoermer and Johannsen), 1907, A., i, 967.

**1-Phenyl-3-methyl-2:5-thiopyrazole.** See Thiopyrine.

*α*- and **β-Phenyl-δ-methylthiosemicarbazide**, *m*-chloro- (Busch and Reinhardt), 1910, A., i, 76.

**3-Phenyl-6-methyl-2-thio-1:2:3:4-tetrahydroquinazoline** and its platinichlorides (Senier and Shepheard), 1909, T., 499.

**1-Phenyl-4-methylthiourazole** (Busch and Opfermann), 1904, A., i, 631.

**Phenylmethyl*di*thiourethane** (v. Braun and Rumpf), 1903, A., i, 619.

**Phenylmethylthiuret**, action of aromatic amines and hydrazines on (Fromm and Baumhauer), 1908, A., i, 702.

**Phenylmethyl-*o*-toluidine**, 2:4-*di*nitro- (Reitzenstein), 1903, A., i, 816.

**Phenylmethyltriazen** (Dimroth), 1903, A., i, 450.
  and its metallic and acetyl derivatives (Dimroth), 1905, A., i, 311, 618.

**Phenylmethyltriazen**, reactions of (Dimroth, Eble, and Gruhl), 1907, A., i, 664.

**β-Phenyl-β-methyltriazen**, *α*-cyano- (Wolff and Lindenhayn), 1904, A., i, 701.

**1-Phenyl-5-methyl-3-triazenylamidrazone** (Rinman), 1905, A., i, 387.

**1-Phenyl-4-methyl-1:2:3-triazole**, 5-hydroxy-, and its derivatives (Dimroth and Letsche), 1905, A., i, 100.
  and its salts (Dimroth and Letsche), 1903, A., i, 129.

**1-Phenyl-3-methyl-1:2:4-triazole** picrate (Pellizzari), 1911, A., i, 1036.

**1-Phenyl-5-methyl-1:2:4-triazole**, preparation of, and its salts (Pellizzari), 1911, A., i, 1035, 1036; (Bamberger), 1912, A., i, 55.

**1-Phenyl-2-methyl-1:3:4-triazole** and its salts (Pellizzari), 1911, A., i, 1036.

**1-Phenyl-5-methyl-1:2:3-triazole-4-carboxylic acid** (v. Meyer and Schumacher), 1908, A., i, 912.

**1-Phenyl-4-methyltriazolyl-3-mercaptol** and its silver salt (Acree), 1904, A., i, 351.

**Phenyl methyl triketone**, acetylphenylhydrazone of (Auwers, Dannehl, and Boennecke), 1911, A., i, 172.

**Phenyl methylundecyl ketone** (Haller and Bauer), 1909, A., i, 655.

**1-Phenyl-2-methylurazole**, reactions of, with diazoalkyls (Nirdlinger and Acree), 1910, A., i, 341; (Nirdlinger, Marshall, and Acree), 1910, A., i, 444.

**1-Phenyl-4-methylurazole** (Busch and Opfermann), 1904, A., i, 631.
  2-acetyl derivative (Acree), 1903, A., i, 867.
  2-benzoyl derivative (Acree), 1907, A., i, 798.
  tautomerism of salts of (Acree, Johnson, Brunel, Shadinger, and Nirdlinger), 1908, A., i, 920.

**δ-Phenyl-α-methylvaleric acid** (v. Braun, Deutsch, and Schmatloch), 1912, A., i, 434.

**β-Phenyl-β-methylvaleric acid** and its silver salt (Inglis), 1911, T., 542; P., 46.

**α-Phenyl-γ-methylvaleric acid** (Bodroux and Taboury), 1910, A., i, 257.

**α-Phenyl-γ-methylvaleronitrile** (Bodroux and Taboury), 1910, A., i, 257.

**β-Phenyl-β-methylvalerophenone** (Kohler), 1907, A., i, 1054.

**Phenylmethylvinyl acetate** (Wohl and Berthold), 1910, A., i, 620.

**9-Phenyl-2-methylxanthen**, 6-hydroxy- (Pope and Howard), 1910, T., 81.

**8-Phenyl-3-methylxanthine**, hydroxy- (Traube and Nithack), 1906, A., i, 215.

**2-Phenylnaphthacinchonic acid**, *o*-nitro- (Ciusa), 1907, A., i, 853.

**Phenyl-β-naphthacinchonic acid**, *m*- and *p*-hydroxy-, and *mp-di*hydroxy- (Pauly, v. Buttlar, and Lockemann), 1911, A., i, 786.

**9-Phenyl-β-naphthacridine** and its hydride (Ullmann, Fetvadjian, and Racovitza), 1903, A., i, 521.

**2-Phenyl-2:3-naphthaglyoxaline** and 1-amino- and their additive salts and *N*-acetyl derivative of the amino-compound (Franzen), 1906, A., i, 706.

*α*-**Phenylnaphthalene** and its bromo-derivatives, formation of (Straus and Müller), 1906, A., i, 78.

**α-Phenylnaphthalene**, 2:*o-di*amino- (Bucherer and Seyde), 1908, A., i, 455.

**β-Phenylnaphthalene**, 1:3-*di*amino-, formation of, and its hydrochloride and acetyl derivatives (Atkinson and Thorpe), 1906, T., 1934; P., 282.
  1-amino-3-hydroxy-, and its hydrochloride, 3-amino-1-hydroxy-, and its *N*-acetyl derivative, and 1:3-*di*hydroxy- (Lees and Thorpe), 1907, T., 1302.

**Phenylnaphthalenes**, hydroxy-, and their acyl derivatives (Hönigschmid), 1903, A., i, 165.

**2-Phenylnaphthalene-1-azo-β-naphthol**, 3-amino-, and its *N*-acetyl derivative (Lees and Thorpe), 1907, T., 1293.

**2-Phenylnaphthalene-3-azo-β-naphthol**, 1-amino- (Lees and Thorpe), 1907, T., 1289.

**2-Phenylnaphthalene-1:4′-azo-2′-phenyl-1′:3′-naphthylenediamine**, 3-amino-, and its *N*-acetyl derivative and their hydrochlorides (Lees and Thorpe), 1907, T., 1294.

**2-Phenylnaphthalene-1-carboxylic acid.** See β-Chrysenic acid.

**Phenylnaphthalenedicarboxylic acid**, constitution of (Michael), 1906, A., i, 518.

**1-Phenylnaphthalene-2:3-dicarboxylic acid**, constitution of (Michael and Bucher), 1908, A., i, 89; (Bucher), 1908, A., i, 791.
  ethyl and ethyl hydrogen esters and the salts of the ester acid (Pfeiffer and Möller), 1907, A., i, 931

**2-Phenylnaphthalene-1:7-dicarboxylic acid** (*chrysodiphenic acid*) and its salts and esters (Graebe and Gnehm), 1905, A., i, 60.

**1-Phenylnaphthalene-2:3-dicarboxylic anhydride** and its reactions (Stobbe, Keding, Naóum, and v. Vigier), 1907, A., i, 769.
  fluorescence of, in different solvents (Stobbe), 1909, A., ii, 282.

**Phenylnaphthaphenazonium**, 2-hydroxy-, and its hydroxide and salts, and acetyl derivative of the hydroxide (Kehrmann and Schwarzenbach), 1908, A., i, 297.

**Phenyl*iso*naphthaphenazonium**, 6-hydroxy-, and its salts (Kehrmann and Brunel), 1908, A., i, 579.

**7-Phenyl*iso*naphthaphenazonium salts**, hydroxy- (Kehrmann), 1907, A., i, 563.

**2-Phenylnaphthapyronium** ferrichloride, and carbinol derivative (Decker and v. Fellenberg), 1909, A., i, 117.

**2-Phenyl-β-naphthaquinoline** (Borsche), 1909, A., i, 956.
  and its derivatives and **4-carboxylic acid** (Simon and Mauguin), 1906, A., i, 888.

**2-Phenyl-β-naphthaquinoline-1-carboxylic acid** (Borsche), 1909, A., i, 956.

**2-Phenyl-β-naphthaquinoline-3:4-dicarboxylic acid** and its esters, salts, and anhydride (Simon and Mauguin), 1906, A., i, 887.

**2-Phenyl-β-naphthaquinoline-3:4-dicarboxylimide** (Simon and Mauguin), 1908, A., i, 296.

*N*-**Phenyl-*N*′-*p*-2-α-naphthaquinonylaminophenylcarbamide**, *p*-amino- (Pummerer and Brass), 1911, A., i, 655.

**Phenylnaphthaquinoxalines**, synthesis of (Fischer and Römer), 1908, A., i, 694.
  2- and 3-, and their *o*-**carboxylic acids** (Fischer and Schindler), 1908, A., i, 221; (Fischer and Römer), 1908, A., i, 695.

**2-Phenylnaphthatriazine**, imino-, and its additive salts (Pierron), 1908, A., i, 926.

**2-Phenyl-αβ-naphthatriazole-5:9-disulphonic acid**, *m*-amino- and *m*-nitro-, and its azo-derivative with β-naphthol-3:6-disulphonic acid (Aktien-Gesellschaft für Anilin-Fabrikation), 1907, A., i, 980.

**11-Phenyl-β-naphthaxanthen,** 8-hydroxy- (Pope and Howard), 1910, T., 83.

**Phenylnaphthiminazoles,** aminohydroxy-derivatives of (Aktien-Gesellschaft für Anilin-Fabrikation), 1906, A., i, 713.

**Phenyl-α-naphthiminazoledisulphonic acid,** 5-hydroxy-3′-amino-, preparation of, and its salts (Aktien-Gesellschaft für Anilin-Fabrikation), 1907, A., i, 1081.

**Phenyl-α-naphthiminazole-5:7-disulphonic acid,** amino- (Aktien-Gesellschaft für Anilin-Fabrikation), 1906, A., i, 714.

**2-Phenyl-α-naphthiminazole-7-sulphonic acid,** 5-hydroxy-, and *p*-nitro-5-hydroxy-(Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 900.

  4-hydroxy-2-*m*-amino-, and its sodium salt (Cassella & Co.), 1911, A., i, 682.

**2-Phenyl-α-naphthiminazole-8-sulphonic acid,** *m*-amino-6-hydroxy- and *m*-nitro-6-hydroxy-, and **-7-sulphonic acid,** *p*-amino-9-hydroxy- (Aktien-Gesellschaft für Anilin-Fabrikation), 1908, A., i, 469.

**2-Phenyl-1-naphthol** and its methyl and acetyl derivatives (Decker), 1908, A., i, 806.

**3-Phenyl-1-naphthol** (Ruhemann), 1910, T., 461.

**Phenylnaphthols,** amino-. See 2-Phenylnaphthalene, 1-amino-3-hydroxy-, and 3-amino-1-hydroxy-.

**4-Phenyl-1:3-β-naphth*iso*oxazine.** See β-Naphthoxazinebenzylidenemethyleneamine.

**2-Phenylnaphth-*peri*-oxazole,** *tri*bromo- (Fichter and Gageur), 1906, A., i, 840.

**α-Phenylnaphthylamine,** 2-amino- and its derivatives (Noelting, Grandmougin, and Freimann), 1909, A., i, 442.

  *m*- and *p*-chloro- (Knoll & Co.), 1912, A., i, 345.

  2′:4′-*di*nitro-8-amino- (Sachs), 1909, A., i, 433.

**β-Phenylnaphthylamine** (Japp and Maitland), 1903, T., 269; (Bucherer and Stohmann), 1904, A., i, 395.

**β-Phenylnaphthylamine** and *o*-, *m*-, and *p*-chloro- (Knoll & Co.), 1912, A., i, 345.

**β-Phenylnaphthylamine,** 4-chloro-2:6-*di*nitro-, preparation of (Ullmann), 1908, A., i, 627.

**β-Phenylnaphthylamine,** *p*-hydroxy- (Bucherer and Stohmann), 1904, A., i, 395.

**α- and -β-Phenylnaphthylamines,** chloronitro-derivatives of (Reverdin and Crépieux), 1903, A., i, 858.

  2:4-*di*nitro-, hydrochlorides of (Buguet), 1910, A., ii, 826.

  thio- (Knoll & Co.), 1912, A., i, 759.

**2-Phenylnaphthylamine-5:7-disulphonic acid,** *p*-nitro-*o*-amino-, and its disodium salt (Gesellschaft für Chemische Industrie in Basel), 1910, A., i, 207.

**2-Phenylnaphthylamine-6:8-disulphonic acid,** *p*-amino- and *p*-hydroxy- and their salts (Bucherer and Seyde), 1907, A., i, 511.

  *p*-nitroso-, preparation of (Badische Anilin- & Soda-Fabrik), 1909, A., i, 221.

**1-Phenylnaphthylamine-8-sulphonic acid,** preparation of (Aktien-Gesellschaft für Anilin-Fabrikation), 1905, A., i, 717.

**2-Phenylnaphthylamine-6-sulphonic acid,** *p*-amino-, *N*-acetyl derivative, and its sodium salt (Bucherer and Seyde), 1907, A., i, 511.

**1-Phenylnaphthylamine-6- and -7-sulphonic acids** (Aktien-Gesellschaft für Anilin-Fabrikation), 1905, A., i, 770.

**2-Phenylnaphthylaminesulphonic acids** and their derivatives, preparation of (Bucherer and Stohmann), 1904, A., i, 395.

**4-Phenyl-1-α- and -β-naphthyl-3:5-*endo*anilo-4:5-dihydro-1:2:4-triazoles** and their salts (Busch and Brandt), 1907, A., i, 260.

**9-Phenyl-10-α-naphthylanthracene** (Guyot and Staehling), 1905, A., i, 887.

**Phenyl-α-naphthylbromoethylene** and its isomeride (Stoermer and Simon), 1905, A., i, 53.

***b*-Phenyl-*a*-α-naphthylcarbamide,** *a*-hydroxy- (Scheiber and Beckmann), 1908, A., i, 725.

**Phenylnaphthylcarbazoles.** See Naphthacarbazoles.

**Phenyl-α-naphthylcarbinol** and its benzoyl derivative (Caille), 1908, A., i, 800.

**Phenyl-β-naphthylcarbinol** and its benzoyl derivative (Perrier and Caille), 1908, A., i, 656.

**Phenyl-α-naphthyl-*p*-chloroformazylbenzene-*p*-sulphonic acid,** potassium salt (Fichter and Fröhlich), 1903, A., i, 723.

*α*-**Phenyl-*β*-*α*-naphthylcinnamonitrile** (BODROUX), 1911, A., i, 545.

**9-Phenyl-10-*α*-naphthyldihydroanthracene** and 9:10-*di*hydroxy-, and its dichloride and dimethyl and diethyl ethers (GUYOT and STAEHLING), 1905, A., i, 887.

**1-Phenyl-2-naphthyl-1:2-dihydro*iso*benzofuran,** 2-hydroxy- (GUYOT and VALLETTE), 1911, A., i, 654.

**2-Phenyl-1:-3-naphthylenediamine,** formation of, from *β*-imino-*α*-cyano-*α*-phenyl-*β*-*o*-tolylethane (ATKINSON, INGHAM, and THORPE), 1907, T., 589; P., 76.

preparation of, and its acetyl, benzylidene, and methyl derivatives and their diazotisation and its compounds with diazonium salts (LEES and THORPE), 1907, T., 1282; P., 189.

methyl derivatives of (BEST and THORPE), 1909, T., 261; P., 28.

**Phenyl-1:8-naphthylenediamine,** 2′:4′-*di*nitro-, condensation of, with ethyl chlorocarbonate (SACHS and FORSTER), 1911, A., i, 754.

**2-Phenyl-1:3-naphthylenedimethyldiamine,** *α*- and *β*-forms, and their dihydrochlorides and dinitrosoamines (LEES and THORPE), 1907, T., 1296.

**Phenyl-1:8-naphthyleneguanidine** and its picrate (SACHS), 1909, A., i, 431.

**2-Phenyl-1:3-naphthylenetetramethyldiamine** and its dihydrochloride and 4-nitroso-derivative (LEES and THORPE), 1907, T., 1300.

**2-Phenyl-1:3-naphthylenetrimethyldiamine** and its hydrochlorides and nitrosoamine (LEES and THORPE), 1907, T., 1299.

*as*-**Phenyl-*α*-naphthylethylene** and bromo- (ACREE), 1904, A., i, 743.

**9-Phenyl-9-*α*-naphthylfluorene,** *p*-amino-, and its hydrochloride (ULLMANN and V. WURSTEMBERGER), 1906, A., i, 77.

**Phenyl-*β*-naphthylformazylbenzene** (FICHTER and FRÖHLICH), 1903, A., i, 723.

**Phenyl-*α*-naphthylformazylbenzene-*p*-sulphonic acid,** sodium salt (FICHTER and FRÖHLICH), 1903, A., i, 723.

**Phenyl *α*-naphthyl ketone** and its oxime and phenylhydrazone (CAILLE), 1908, A., i, 800.

compound of, with sodamide (RAMART-LUCAS), 1909, A., i, 489.

**Phenyl *α*-naphthyl ketone,** *o*-amino- (ULLMANN and BLEIER), 1903, A., i, 176.

**Phenyl *β*-naphthyl ketone** and its oxime, phenylhydrazone, and semicarbazone (PERRIER and CAILLE), 1908, A., i, 656.

**Phenyl *α*- and *β*-naphthyl ketones,** preparation of (MONTAGUE), 1907, A., i, 855.

fission of, by sodamide (RAMART-LUCAS), 1909, A., i, 488.

**Phenyl *α*-naphthyl ketoneanil** and its hydrochloride and picrate (BUSCH and FALCO), 1910, A., i, 747.

**Phenyl-*α*-naphthylmethyl-acetyl-** and **-benzoyl-acetones** and **-benzoylacetic acid,** ethyl ester (FOSSE), 1908, A., i, 86.

**Phenylnaphthylmethyldimethylammonium** chloride (BADISCHE ANILIN- & SODA-FABRIK), 1911, A., i, 627.

*β*-**Phenyl-*β*-naphthylmethylmalonamic acid** (KOHLER and REIMER), 1905, A., i, 348.

**5-Phenyl-*β*-naphthyl-3-methylpyrazole,** 7′-hydroxy- (FRANZEN and DEIBEL), 1908, A., i, 832.

**Phenyl-*α*- and -*β*-naphthyl-methyl- and -ethyl-thiocarbamides** (BILLETER and RIVIER), 1905, A., i, 50.

*p*-**Phenyl-*α*-naphthylmethyltriphenylmethyl** chloride (TSCHITSCHIBABIN), 1908, A., i, 872.

**Phenyl-*α*- and -*β*-naphthyloxamide** (SUIDA), 1910, A., i, 665.

**5-Phenyl-2-*α*-naphthyloxazole** and its picrate (LISTER and ROBINSON), 1912, T., 1306.

**2-Phenyl-5-*α*-naphthyloxazole** and its picrate (LISTER and ROBINSON), 1912, T., 1308.

**Phenyl-*β*-naphthylphosphoramide** (KIPPING and CHALLENGER), 1911, T., 635.

**Phenyl-*β*-naphthylphosphor-*p*-toluidide** (KIPPING and CHALLENGER), 1911, T., 636.

**Phenyl-*β*-naphthylphosphoryl** chloride (KIPPING and CHALLENGER), 1911, T., 629.

**Phenyl-*β*-naphthylphthalamic acid** (TINGLE and BRENTON), 1909, A., i, 799.

*β*-**Phenyl-*β*-naphthylpropionic acid,** *α*-cyano-, ethyl ester (KOHLER and REIMER), 1905, A., i, 348.

**Phenylnaphthylpropiophenone** (KOHLER and JOHNSTIN), 1905, A., i, 216.

**6-Phenyl-2-*α*-naphthylpyridine** and its platinichloride (SCHOLTZ and MEYER), 1910, A., i, 562.

**Phenyl-*β*-naphthyltartramide** (TINGLE and BATES), 1909, A., i, 910.

*b*-**Phenyl-*α*-α-naphthylthiocarbamide,** *α*-hydroxy- (Scheiber and Beckmann), 1908, A., i, 725.

**Phenyl-*β*-naphthylthiosemicarbazide,** 7′-hydroxy- (Franzen and Deibel), 1908, A., i, 832.

**δ-Phenyl-*β*-2-naphthylthiosemicarbazide** and its benzylidene derivative (Busch and Reinhardt), 1910, A., i, 76.

**Phenyl-*α*-naphthyltriazen** (Dimroth, Eble, and Gruhl), 1907, A., i, 665.

**Phenylnaphthyl-1:2-triazole-3:8-disulphonic acid,** *p*-amino- (Aktien-Gesellschaft für Anilin-Fabrikation), 1906, A., i, 906.

**4-Phenyl-1:8-naphthyrid-2-one** and its platinichloride (Palazzo and Tamburini), 1911, A., i, 327.

**Phenylnitramic acid,** *tri*nitro-, sodium salt (Witt and Witte), 1908, A., i, 875.

**Phenyl*iso*nitroacetamide,** sodium derivative (van Peski), 1909, A., i, 647.

**Phenyl*iso*nitroacetonitrile,** saponification of, to the amide by hydrogen peroxide (van Peski), 1909, A., i, 647.

**Phenyl*iso*nitroacetonitrile,** *p*-bromo-, and its salts (Wislicenus and Elvert), 1909, A., i, 29.

**α-Phenyl-2-nitro-3-acetoxy-4-methoxycinnamic acid** (Pschorr and Vogtherr), 1903, A., i, 183.

**Phenylnitroamine.** See Benzenediazoic acid.

*N*-**Phenyl-*o*-nitrobenzaldoxime** (Beckmann, Ebert, Netscher, and Schulz), 1909, A., i, 654.

**2-Phenyl-1-*p*-nitrobenzoylaminophenylbenziminazole,** 5:*p*-*di*nitro- (Kym), 1904, A., i, 454.

**1-Phenyl-4-*p*-nitrobenzylidenehydantoin** and 2-thio- (Johnson and Brautlecht), 1912, A., i, 805.

1- and **3-Phenyl-4-*p*-nitrobenzylidenehydantoins,** 2-thio- (Wheeler and Brautlecht), 1911, A., i, 501.

**Phenyl-*m*-nitrobenzylidenehydrazine,** action of amyl nitrite on (Bamberger and Pemsel), 1903, A., i, 285; 1909, A., i, 56; (Minunni), 1905, A., i, 91.

**Phenyl-*m*-nitrobenzylidenehydrazine,** *o*-chloro- and *o*-iodo- (Busch and Meussdörffer), 1907, A., i, 349.

**Phenyl-*α*-*m*-*di*nitrobenzylidenehydrazine** (Bamberger and Pemsel), 1903, A., i, 285.

**Phenyl-*p*-nitrobenzylidenemethylhydrazine** (Backer), 1912, A., i, 731.

**3-Phenyl-*o*-,-*m*-,and-*p*-nitrobenzylidene-*iso*oxazolones** (Meyer), 1912, A., i, 1019.

**3-Phenyl-5-*o*-nitrobenzylidenerhodanic acid** (Andreasch and Zipser), 1903, A., i, 856.

**Phenyl-*m*-nitrobenzylidene-ψ-thiohydantoin** (Wheeler and Jamieson), 1903, A., i, 521.

**Phenyl-*p*-nitrobenzylnitroamine,** 2-bromo-4:6-*di*nitro- and 2:4-6-*tri*nitro- (Blanksma), 1903, A., i, 334.

**Phenyl-2-*p*-nitrobenzyl-1:4:6-pyronone,** 3:5-*di*-*p*-nitro- (Wedekind, Häussermann, Weisswange, and Miller), 1911, A., i, 220.

**Phenyl-*o*-nitrocinnamic acid,** products of dehydration of, and the products which accompany this acid when prepared by Perkin's synthesis (Bakunin and Parlati), 1906, A., i, 664.

**α-Phenyl-*p*-nitrocinnamic acid,** *p*-nitro-, and its ethyl ester (Borsche), 1909, A., i, 925.
  2:4-*di*nitro-, methyl ester (Borsche), 1909, A., i, 386.

**Phenylnitrocinnamic acids** and their derivatives, spacial isomerism in the (Bakunin and Parlati), 1907, A., i, 415.

**Phenylnitroethanol,** secondary (Holleman), 1905, A., i, 58.

**Phenylnitroethenylamino-oxime** and its hydrochloride and copper salt (Steinkopf and Benedek), 1908, A., i, 1012.

**Phenylnitroethylene,** reactions of (Meisenheimer and Heim), 1907, A., i, 858.

*iso***Phenylnitroethylene,** polymeride of (Meisenheimer and Heim), 1907, A., i, 859.

**Phenylnitroglyoxime** *per*oxide (Wieland), 1903, A., i, 769.

**Phenyl-5-nitro-2-hydroxybenzylethylamine** (Einhorn, Bischkopff, and Szelinski), 1906, A., i, 247.

**Phenyl-*o*-nitroindone.** See 2-Phenylindone, 4-nitro-.

**Phenylnitrolic acid** (Wieland and Semper), 1906, A., i, 643.

**Phenylnitromethane.** See Toluene, ω-nitro-.

**Phenyl*iso*nitromethane.** See Toluene, ω-*iso*nitro-.

**Phenyl*di*nitromethane.** See Toluene, ω-*di*nitro-.

**3-Phenyl-1-*p*-nitro-5-methyl-1:2:4-triazole** (Ponzio), 1910, A., i, 443.

**Phenyl-2:4-*di*nitro-1-naphthylamine** (Ullmann), 1908, A., i, 627.
  and 2-hydroxy- (Ullmann and Bruck), 1909, A., i, 22.

**Phenyl-4-nitro-α-naphthyloxamide**, *o*- and *p*-nitro- (Suida), 1911, A., i, 366.

**Phenyl*tri*nitrophenylbenzenylamidine**, *o*- and *m*-chloro- (v. Walther and Grossmann), 1909, A., i, 56.
  *p*-chloro- (v. Walther), 1903, A., i, 583.

**Phenyl-*o*-nitrophenylene-ethylene** (*phenyl-*o*-nitrophenylacrylene*) (Bakunin and Parlati), 1906, A., i, 664.

**α-Phenyl-β-*p*-nitrophenylethyl-β-methylthiocarbamide** (Johnson and Guest), 1910, A., i, 471.

**α-Phenyl-β-*p*-nitrophenylethylthiocarbamide** (Johnson and Guest), 1910, A., i, 311.

**α-Phenyl-β-2:4-*di*nitrophenylethylthiocarbamide** (Johnson and Guest), 1910, A., i, 311.

**1-Phenyl-5-*p*-nitrophenyl-3-methylpyrazoline** (Auwers and Voss), 1910, A., i, 71.

**3-Phenyl-1-*o*-nitrophenyl-5-methyl-1:2:4-triazole** (Ponzio), 1910, A., i, 443.

**3-Phenyl-2-*o*-nitrophenyl-β-naphthaquinoline** (Borsche), 1909, A., i, 957.

**3-Phenyl-2-*o*-nitrophenyl-β-naphthaquinoline-1-carboxylic acid** (Borsche), 1909, A., i, 956.

**Phenyl-*p*-nitrophenyloxamide** (Suida), 1910, A., i, 665.

**5-Phenyl-2-*o*-, -*m*-, and -*p*-nitrophenyloxazoles** (Lister and Robinson), 1912, T., 1310.

**δ-Phenyl-β-*m*-nitrophenylthiosemicarbazide** (Busch and Reinhardt), 1910, A., i, 76.

**5-Phenyl-1-*p*-nitrophenyl-1:2:3:4-tetrazole** (Dimroth and de Montmollin), 1910, A., i, 900.

**1-Phenyl-2:5-*di*-*m*-nitrophenyl-1:3:4-triazole** (Stollé and Weindel), 1906, A., i, 709.

**Phenylnitrosoamino*iso*butyric acid** (Mulder), 1907, A., i, 508.

**Phenylnitrosohydroxylamine**, *p*-bromo- (Bamberger and Baudisch), 1909, A., i, 909.
  *p*-chloro-, and its hydroxylamine, phenylhydrazine, and metallic salts (Bamberger and Baudisch), 1909, A., i, 978.

**Phenyl *m*- and *p*-nitrostyryl ketone-phenylhydrazone** (Auwers and Voss), 1910, A., i, 71.

**Phenyl-2:6-*di*nitro-*p*-tolylamine** (Ullmann and Nádai), 1908, A., i, 526.

**Phenyl-4:6-*di*nitro-3-tolylamine**, 4′-amino-, 3′-*mono*- and 3:5-*di*-chloro-4′-hydroxy-, and 4′-hydroxy- (Reverdin, Dresel, and Delétra), 1904, A., i, 580.

**Phenyl-2:4:6-*tri*nitro-3-tolylamine**, and 4′-amino-, and 4′-hydroxy- (Reverdin, Dresel, and Delétra), 1904, A., i, 580.

**Phenyl-4-nitro-2-tolyliodonium** salts (Willgerodt and Kok), 1908, A., i, 620.

**3-Phenyl-1-*o*-nitro-*p*-tolyl-5-methyl-1:2:4-triazole** (Ponzio), 1910, A., i, 444.

**3-Phenyl-1-*p*-nitro-*o*-tolyl-5-methyl-1:2:4-triazole** (Ponzio), 1910, A., i, 443.

**Phenyl-*o*-nitro-*p*-tolyloxamide** (Suida), 1910, A., i, 665.

**6-Phenyl-2-nonylpyridine** and its platinichloride (Scholtz and Meyer), 1910, A., i, 562.

**Phenyloctylene** (v. Braun, Deutsch, and Schmatloch), 1912, A., i, 434.

**Phenylosazone**, *p*-nitro-, $C_{15}H_{12}O_6N_6$ from cellulose nitrate (Berl and Fodor), 1911, A., i, 265.

**Phenylosazones** of α-diketones and reducing sugars, thermochemistry of (Landrieu), 1906, A., ii, 270.

**Phenyloxamic acid.** See Oxanilic acid.

**Phenyloxamide.** See Oxanilamide.

**Phenyloxanilic acid**, phenyl ester (Bischoff and Fröhlich), 1907, A., i, 28.

**3-Phenyl*iso*oxazole**, 4-amino-, and its acyl derivatives and salts, and 4-nitro- (Wieland), 1903, A., i, 769.

**5-Phenyl*iso*oxazole** (Moureu and Delange), 1904, A., i, 650.

**5-Phenyloxazole-2-*p*-benzeneazodiethylaniline** (Lister and Robinson), 1912, T., 1313.

**5-Phenyl*iso*oxazole-3-carboxylic acid**, *p*-amino-, acetyl derivative, ethyl ester (Bülow and Nottbohm), 1903, A., i, 863.

**3-Phenyl*iso*oxazole-5-carboxylic acid** (Schöttle), 1912, A., i, 915.

**3-Phenyl*iso*oxazolidone**, 2-hydroxy- (Posner), 1906, A., i, 955.

**Phenyloxazolone**, *p*-bromo-, and oximino-*p*-bromo-, pantachromic salts of (Hantzsch and Heilbron), 1910, A., i, 198.

**Phenyloxazolone,** oximino- (Lublin), 1907, A., i, 214.

ethyl ester, salts of (Hantzsch and Kemmerich), 1909, A., i, 336.

**3-Phenyl-5-*iso*oxazolone** (Posner), 1905, A., i, 577; (Tingle), 1905, A., i, 930.

and its bromo-, nitroso-, and acetyl derivatives (Posner), 1906, A., i, 955.

and its imine and its hydrochloride and benzoyl derivative (Moureu and Lazennec), 1907, A., i, 716.

and its condensation with aromatic aldehydes (Wahl and Meyer), 1908, A., i, 368.

condensation of, with ethyl mesoxalate (Meyer), 1910, A., i, 593.

indigoid dyes derived from (Wahl), 1909, A., i, 261.

azo-derivatives of (Meyer), 1911, A., i, 341.

**3-Phenyl-5-*iso*oxazolone,** 4:4-*di*bromo-, and its derivatives (Meyer), 1912, A., i, 582.

*s*-*di*nitro- (Berend and Heymann), 1904, A., i, 670.

**3-Phenyl*iso*oxazolone-2-indole** (Wahl), 1909, A., i, 261.

**Phenyloximinoacetic acid,** *p*-bromo- (Wislicenus and Elvert), 1909, A., i, 30.

**Phenyloxyacetiminoethyl ether,***o*-nitro-, hydrochloride (Heller and Amberger), 1904, A., i, 417.

**Phenylparabanic acid** (Dieckmann and Kämmerer), 1907, A., i, 979.

**Phenylparaconic acids,** isomeric (Fittig, Breslauer, and Jehl), 1904, A., i, 419.

**Phenylpentadecylcarbinol** (Ryan and Nolan), 1912, A., i, 750.

**Phenyl pentadecyl ketone** and its oxime (Ryan and Nolan), 1912, A., i, 749.

physical properties of (Eykman), 1904, A., i, 591.

**Phenylpentadecylnitrosoamine** (Le Sueur), 1910, T., 2439.

**α-Phenyl-$\Delta^{\alpha\gamma}$-pentadiene** and its optical behaviour (Klages), 1907, A., i, 500.

**ε-Phenyl-$\Delta^{\alpha\gamma}$-pentadien-ε-one-α-carboxylic acid,** *αβ-di*bromo-, sodium salt (Dieckmann and Platz), 1905, A., i, 118.

**α-Phenylpentane,** *αδ-di*amino- (*δ-phenyl-α-methyltetramethylenediamine*) and its derivatives (Finzi), 1912, A., i, 1022.

**α-Phenylpentane,** δ-bromo-, and δ-cyano- (v. Braun, Deutsch, and Schmatloch), 1912, A., i, 434.

ε-nitro-, and its derivatives (v. Braun and Kruber), 1912, A., i, 266.

**1-Phenyl*cyclo*pentane** and 3-bromo- (Borsche and Menz), 1908, A., i, 149.

**1-Phenyl*cyclo*pentane,** *p*-nitro- (v. Braun and Deutsch), 1912, A., i, 436.

**1-Phenyl*cyclo*pentane-3-carboxylic acid** and its salts (Borsche and Menz), 1908, A., i, 149.

**Phenyl*cyclo*pentane group,** investigation of the (Borsche, Menz, and Fels), 1908, A., i, 147.

**1-Phenyl*cyclo*pentan-3-ol** and its acetate and phenylurethane (Borsche and Menz), 1908, A., i, 149.

**α-Phenylpentan-β-one** and its semicarbazone (Senderens), 1910, A., i, 489.

**α-Phenylpentan-γ-one** and its semicarbazone (Senderens), 1911, A., i, 302.

**1-Phenyl*cyclo*pentan-3-one** and its semicarbazone (Borsche and Menz), 1908, A., i, 149.

**Phenyl-$\Delta^{\beta}$-pentene** (Klages), 1907, A., i, 500.

**Phenyl*cyclo*pentene** (Borsche and Menz), 1908, A., i, 149.

**α-Phenyl-$\Delta^{\alpha}$- and -$\Delta^{\beta}$-pentenes** and their bromides (Klages, Gieser, and Lauck), 1906, A., i, 661.

**α-Phenylpentenecarboxylic acids,** β-chloro- (Dimroth and Feuchter), 1903, A., i, 630.

**δ-Phenyl-$\Delta^{\alpha}$-pentenoic acid,** conversion of, into the $\Delta^{\gamma}$-isomeride (Bougault), 1911, A., i, 202.

**δ-Phenyl-$\Delta^{\beta}$-pentenoic acid,** ethyl ester (Michael and Garner), 1906, A., i, 275.

menthyl ester (Rupe and Münter), 1909, A., i, 928.

**α-Phenyl-$\Delta^{\alpha}$-penten-γ-ol** and β-bromo-, and **α-Phenyl-α-pentinen-γ-ol** and their reduction (Klages, Gieser, and Lauck), 1906, A., i, 661.

**ε-Phenyl-$\Delta^{\alpha}$-penten-γ-ol-ε-one-α-carboxylic acid,** *αβ-di*bromo- and *αβ-di*chloro-, lactones of (Dieckmann and Platz), 1905, A., i, 118.

**1-Phenyl-$\Delta^{1}$-*cyclo*penten-3-one** (Borsche and Fels), 1906, A., i, 509; 1907, A., i, 81.

preparation and derivatives of (Borsche and Menz), 1908, A., i, 148.

*α*-**Phenyl-$\Delta^{\alpha}$-pentinen-*γ*-ol** (BRACHIN), 1907, A., i, 129.

*α*-**Phenyl-$\Delta^{\beta}$-pentinen-*α*-ol** and its benzoyl derivative and di-iodide (DUPONT), 1909, A., i, 546.

**4-Phenyl*cyclo*pentylidene-1-phenyl*cyclo*pentan-3-one** (BORSCHE and MENZ), 1908, A., i, 149.

**1-Phenylperimidine,** *op*-*di*nitro-, and its picrate (SACHS and FORSTER), 1911, A., i, 754.

**2-Phenylperimidine** and its salts (SACHS), 1909, A., i, 428.

**2-Phenylperimidine,** *o*-, *m*-, and *p*-nitro-, *o*-amino-, and anhydro-compound from, *m*-amino-, and *p*-amino-, and its acetyl derivative (SACHS and STEINER), 1909, A., i, 970.

**1-Phenylperimidine-2-benzoic acid,** *op*-*di*amino-, and its picrate and *op*-*di*nitro- (SACHS and FORSTER), 1911, A., i, 755.

**Phenylphenacetylaminomethylcarbinol** (PICTET and GAMS), 1910, A., i, 774.

**Phenylphenacylacetic acid,** synthesis of, from phenylsuccinic acid (ANSCHÜTZ and WALTER), 1907, A., i, 769.

**Phenylphenacyl-oxamethane** and **-urethane** (MASELLI), 1905, A., i, 776.

**3-Phenyl-5-phenacyl*iso*oxazole** (SCHÖTTLE), 1912, A., i, 915.

**Phenylphenanthraphenazonium** salts, hydroxy- (ULLMANN and FUKUI), 1908, A., i, 298.

*s*-**Phenyl-4-phenanthrylcarbamide** (SCHMIDT and HEINLE), 1911, A., i, 626.

**10-Phenylphenazonium,** 1- and 3-amino-, their salts and acetyl derivatives (KEHRMANN and MASSLENIKOFF), 1911, A., i, 927.

2:6-*di*amino-, chloride (KEHRMANN and RIERA Y PUNTI), 1911, A., i, 926.

2-amino-3-hydroxy-, and its diacetyl derivative and 3-hydroxy-, and their salts (KEHRMANN and SCHWARZENBACH), 1908, A., i, 297.

*di*chloro-, salts of (BALLS, HEWITT, and NEWMAN), 1912, T., 1849.

*S*-**Phenylphenazothionium,** derivatives of (SMILES and HILDITCH), 1907, P., 306; 1908, T., 145, 1687; P., 199; (BARNETT and SMILES), 1910, T., 362; P., 47.

hydroxide and salts, *α*- and *β*-3:9-*di*nitrohydroxy- (SMILES and HILDITCH), 1908, T., 1692.

hydroxide and salts, *isodi*nitrohydroxy- (SMILES and HILDITCH), 1908, T., 1697.

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**Phenyl-*m*-phenetylthiocarbamide** (JACOBSON and HÖNIGSBERGER), 1904, A., i, 205.

**Phenyl-*p*-phenetidylethylene** (BUSIGNIES), 1910, A., i, 668.

*α*-**Phenyl-*p*-phenetidylpropylene** and *β*-bromo- (BUSIGNIES), 1910, A., i, 668.

**7-Phenyl-1:2-** and **-2:1-phenonaphthacridines,** 9-amino- and 9-nitro- (ULLMANN and ERNST), 1906, A., i, 205.

9:11-*di*nitro- (ULLMANN and BROIDO), 1906, A., i, 189.

**11-Phenylphenonaphthafluorone** (POPE and HOWARD), 1911, T., 549.

**Phenyl phenoxymethyl ketone,** *p*-amino-, acetyl derivative (KUNCKELL), 1911, A., i, 990.

**3-Phenyl-5-phenoxymethyl*iso*oxazole** (v. WALTHER and LITTER), 1911, A., i, 237.

**4-Phenyl-3-phenoxymethyl*iso*oxazolone** and 5-imino-4-*p*-chloro- (v. WALTHER and HERSCHEL), 1911, A., i, 238.

**3-Phenyl-5-phenoxymethylpyrazole** (v. WALTHER and LITTER), 1911, A., i, 237.

**Phenyl-*β*-phenylalkylsulphones** (POSNER and TSCHARNO), 1905, A., i, 279.

**Phenyl-*β*-phenylbutenylsulphone** (POSNER and TSCHARNO), 1905, A., i, 279.

**Phenyl *δ*-phenylbutyl ketone** and its oxime (BORSCHE), 1912, A., i, 194.

**Phenylphenylbutylthiocarbamide** (v. BRAUN and DEUTSCH), 1912, A., i, 694.

**Phenyl-*o*-phenylenediamine,** acetyl and benzoyl derivatives (WOLFF), 1912, A., i, 1028.

**Phenyl-*o*-phenylenediamine,** 2:4-*di*nitro-, and its hydrochloride (BORSCHE and RANTSCHEFF), 1911, A., i, 332.

**Phenyl-*p*-phenylenediamine** and its derivatives, preparation of (ULLMANN), 1908, A., i, 457.

bases formed by condensing, with aromatic aldehydes, hydrochlorides of (MOORE and WOODBRIDGE), 1908, A., i, 686.

**Phenyl-*p*-phenylenediamine,** 4′-bromo-, and 4-chloro-, and their salts (BAMBERGER and HAM), 1911, A., i, 685.

*tri*- and *penta*-bromo- (JACOBSON, BARTSCH, LOEB, and STEINBRENCK), 1909, A., i, 683.

**Phenyl-*p*-phenylenediamine**, 2- and 4-*mono*-, 2:4-*di*-, and 2:4:6-*tri*-nitro-, and their diazo-derivatives (Morgan and Micklethwait), 1908, T., 608; P., 48.

*as*-**Phenyl-*p*-phenylene-ether-phenyliodinium** hydroxide, *m*-*di*nitro-, and its salts with acids (Willgerodt and Wiegand), 1909, A., i, 912.

**Phenyl-*p*-phenylenemethyldiamine**, *di*- and *tri*-nitro- (Gnehm and Schröter), 1906, A., i, 212.

**Phenylphenylene-β-naphthylenemethane** (Ullmann and Mourawiew-Winigradoff), 1905, A., i, 642.

**α-Phenyl-β(α)-phenylethyl-β-ethylhydrazine** and its derivatives (Wieland and Fressel), 1911, A., i, 495.

**1-Phenyl-4-α-phenylethylidene-3-methyl-5-pyrazolone** (Heiduschka and Rothacker), 1912, A., i, 52.

**Phenyl β-phenylethyl ketone** (Dutta and Watson), 1912, P., 106.

**Phenyl β-phenylethyl ketone**, *op*-*di*hydroxy- (2′:4′-*dihydroxyhydrochalkone*) and its methyl ethers and oxime (Bargellini and Marantonio), 1908, A., i, 801.

**Phenyl-β-phenylethylmethylamine** and its picrate and platinichloride (v. Braun), 1911, A., i, 35.

**β-Phenyl-α-phenylethyl-α-methylcarbamide** (Johnson and Guest), 1909, A., i, 785.

**β-Phenyl-α-phenylethyl-α-methylthiocarbamide** (Johnson and Guest), 1909, A., i, 785.

**Phenyl β-phenyl-α-methylbutyl ketone** and its oxime (Reynolds), 1910, A., i, 858.

**Phenylphenylpropylthiocarbamide** (v. Braun and Deutsch), 1912, A., i, 694.

**Phenyl phenylstyryl ketone** (*phenylbenzylideneacetophenone*) (Kohler and Johnstin), 1905, A., i, 215.

**Phenyl β-phenylthiol-γ-benzylidenepropyl ketone** (Ruhemann), 1905, T., 24.

**Phenylphosphordi-*p*-toluidide** (Kipping and Challenger), 1911, T., 636.

**Phenylphthalamic acid**, aniline, benzylamine, methylamine, and β-naphthylamine salts (Komatsu), 1909, A., i, 483.

**Phenylphthalamic acid**, *p*-amino-, *N*-acetyl derivative of, and its *o*-*mono*- and *di*-nitro-derivatives (Chazel), 1907, A., i, 793.

**Phenylphthalamic acid**, *p*-chloro- (Tingle and Brenton), 1909, A., i, 799.

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**3-Phenylphthalazone-1-carboxylic acid**, ethyl ester (Dieckmann and Meiser), 1908, A., i, 895.

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**Phenylphthalimide**, action of magnesium organo-compounds on (Béis), 1904, A., i, 503, 671.

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**Phenylphthalimides**, isomeric (Kuhara and Komatsu), 1909, A., i, 484; 1911, A., i, 205.

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**Phenyl-γ-phthalimidopropylsulphone** (Gabriel and Colman), 1912, A., i, 116.

**Phenyl ζ-phthaliminohexyl ketone** (Gabriel), 1909, A., i, 892.

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**10-Phenylphthaloperine**, 10-hydroxy-, and its hydrochloride (Sachs), 1909, A., i, 430.

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**β-Phenylpimelic-δ-acetic acid** and its methyl ester (Meerwein), 1908, A., i, 545.

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**1-Phenylpiperidine**, *di-o*-nitro- (Borsche and Rantscheff), 1911, A., i, 330.
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*trans*-**Phenyl*cyclo*propanecarboxylic acid** and its salts, ethyl ester, amide, and amino- and nitro-derivatives (Buchner and Geronimus), 1904, A., i, 53.
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**α-Phenylpropane-αγγ-trimalonic acid** and its esters (Meerwein), 1908, A., i, 545.
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- **Phenylpropiolaldehyde** (*phenylpropargylaldehyde*), reaction of, with organo-magnesium haloids (Brachin), 1907, A., i, 128.
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  - *dl*-, *d*-, and *l*-β-octyl esters of (Pickard and Kenyon), 1911, T., 67.
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- **Phenylpropiolyl chloride**, action of, on ketonic compounds (Ruhemann and Merriman), 1905, T., 1383; P., 224; (Ruhemann), 1906, T., 682; P., 89.
- **Phenylpropiolylcarbamic acid**, ethyl ester (Ruhemann and Priestley), 1909, T., 451; P., 62.
- **Phenylpropiolylcarbamide** (Ruhemann), 1909, T., 1609; P., 220.
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- **Phenylpropiolyl-*p*-tolylcarbamide** (Ruhemann), T., 1609; P., 220.
- *dl*-β-**Phenylpropionacetal**, α-amino-, and its picrate (Fischer and Kametaka), 1909, A., i, 213.
- β-**Phenylpropionamide** (*hydrocinnamamide*), action of sodium hypochlorite and of bromine and sodium alkyloxides on (Weerman and Jongkees), 1906, A., i, 665.
- β-**Phenylpropionamide**, α-cyano-*p*-hydroxy- (Sclavi), 1911, A., i, 398.
- α-**Phenylpropionanilide** (Staudinger and Ružička), 1911, A., i, 464.
- β-**Phenylpropionhydroxamic acid**, α-amino-β-hydroxylamino-, benzoyl derivative (Posner and Stirnus), 1912, A., i, 457.
  - *m*-amino-β-hydroxylamino-, and β-hydroxylamino-*o*-, -*m*-, and -*p*-nitro- (Posner), 1912, A., i, 455.
  - β-hydroxylamino-*m*-hydroxy-, hydroxylamine salt (Posner), 1912, A., i, 455.
- α-**Phenylpropionic acid**, menthyl ester (Rupe and Busolt), 1909, A., i, 928.
- α-**Phenylpropionic acid**, α-amino-, *dl*-, *d*-, and *l*-formyl derivatives (McKenzie and Clough), 1912, T., 394.
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    - and its ethyl ester (Grignard), 1903, A., i, 32.
    - and *p*-methoxy-α-phenylpropionic acid, α-hydroxy-, comparative study of the dehydration of (Bougault), 1908, A., i, 340.
  - *l*-α-hydroxy-, ethyl ester (McKenzie and Clough), 1910, T., 2569; P., 325.
  - 2:5-*di*hydroxy-, and its anhydride, and 2:5-*tri*hydroxy-, synthesis of (Neubauer and Flatow), 1907, A., i, 771.
- β-**Phenylpropionic acid** (*benzylacetic acid: hydrocinnamic acid*), velocity of esterification of (Kailan), 1908, A., ii, 27.
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*d*- and *l*-α-bromo-, and their ethyl esters (Fischer and Schoeller), 1907, A., i, 1037.
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**β-Phenylpropionylglycine**, synthesis and degradation products of (Dakin), 1908, A., ii, 720.

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**β-Phenylpropionyltropeine**, α-hydroxy-, and its salts and methobromide (Jowett and Pyman), 1909, T., 1023.

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**β-Phenylpropyl** acetate (Wohl and Berthold), 1910, A., i, 620.

**γ-Phenylpropyl** chloride, *p*-hydroxy-, and *p*-nitro- (v. Braun and Deutsch), 1912, A., i, 845.

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**α-Phenylpropyl alcohol**, β-oximino- (Rabe and Hunnius), 1912, A., i, 718.

**α-Phenyl*iso*propyl alcohol**, quaternary ammonium base from, and its derivatives (Emde and Runne), 1910, A., i, 479.

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**β-Phenylpropyl alcohol** (*dihydrocinnamyl alcohol*), γ-chloro- (Riedel), 1907, A., i, 920.

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**β-Phenyl*iso*propyl alcohol**, β-amino-, and its salts (Emde and Runne), 1909, A., i, 300.

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**γ-Phenyl-α-*iso*propyleneparaconic acid,** *p*-chloro- (Stobbe and Wahl), 1911, A., i, 374.
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**α-Phenylpropylmalonic acid,** and its ethyl ester (Reynolds), 1910, A., i, 858.
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  and its methyl ester (Borsche), 1912, A., i, 264.
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**α-Phenylpropyl-methyl-** and **-ethylamines** and their hydrochlorides (Busch and Leefhelm), 1908, A., i, 153.
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**γ-Phenylpropylpropylcyanamide** (v. Braun), 1911, A., i, 36.
**5-Phenyl-3-propylpyrazole** and its picrate (Moureu and Brachin), 1904, A., i, 824.
**1-Phenyl-3-propylpyrazoline** (Maire), 1908, A., i, 291.

**1-Phenyl-3-propylpyrazolone** (Bouveault and Bongert), 1903, A., i, 144.

**4-Phenyl-2-propylquinoline**, 7-hydroxy- (Bülow and Issler), 1904, A., i, 191.

**β-Phenyl-α-*iso*propylsuccinic acid** (Avery and Upson), 1908, A., i, 343.

**Phenylpropylthiocarbamide** (v. Braun and Deutsch), 1912, A., i, 694.

**Phenylpropylthiocarbimide** (v. Braun and Deutsch), 1912, A., i, 693.

**γ-Phenylpropyl*di*thiourethane** (v. Braun), 1912, A., i, 552.

**1-Phenyl-3-propyl-1:2:4-triazole**, 5-hydroxy-, and its acetyl and αβ-dibromo-derivatives (Rupe and Metz), 1903, A., i, 536.

**1-Phenyl-3-propyl-1:2:4-triazol-5-one-4-carboxylamide** (Rupe and Metz), 1903, A., i, 536.

**γ-Phenylpropyltrimethylammonium** bromide and its platinichloride (v. Braun), 1911, A., i, 35.

**Phenyl*iso*propyltrimethylammonium**, *p*-hydroxy-, and *di*hydroxy-, iodides (Rosenmund), 1911, A., i, 34.

**1-Phenyl-2-*n*- and -*iso*-propylurazole** and their silver salts (Brunel and Acree), 1910, A., i, 521.

**1-Phenyl-4-*n*-propylurazole** (Brunel and Acree), 1910, A., i, 521.

**α-Phenyl-α-propylvaleramide** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 974.

**α-Phenyl-α-*n*-propylvaleronitrile** (Bodroux and Taboury), 1910, A., i, 482; (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 974.

**2-Phenylpurine**, 6-chloro- (Traube and Herrmann), 1904, A., i, 634.

**3-Phenylpyrazo*iso*coumarazone**, and 4-bromo- and 4-chloro- (Michaelis and Leo), 1910, A., i, 515.

**1-Phenylpyrazole**, 4-bromo- and 4-chloro- (Dieckmann and Platz), 1905, A., i, 117.
3:5-*di*bromo-, 3:4:5-*tri*bromo-, 5-chloro-, 5-chloro-4-bromo-, 4:5-*di*chloro-, 3:5-*di*chloro-4-bromo-, 3:4:5-*tri*chloro-, and their salts (Michaelis and Walter), 1911, A., i, 1040.

**3-Phenylpyrazole**, 5-*mono*- and 4:5-*di*-chloro-, 5-chloro-4-bromo-, 5-chloro-4-bromo-3-nitro-, and 5-chloro-3-nitro- (Michaelis and Rassmann), 1907, A., i, 246.

**4-Phenylpyrazole**, reduced derivatives (Buchner and Perkel), 1904, A., i, 101.

**Phenylpyrazoles**, azo-compounds of, and their halogen and thio-derivatives (Michaelis, Leonhardt, Wahle, Simon, and Behrens), 1905, A., i, 392.

**3-Phenylpyrazole-1-acetic acid**, 5-chloro-, and its salts and 5-chloro-4-bromo- (Michaelis and Schmidt), 1910, A., i, 641.

**1-Phenylpyrazole-3-acetic-4-carboxylic acid** and *p*-bromo-, and their salts and ethyl esters (Wislicenus and Breit), 1907, A., i, 967; (Wislicenus and Bywaters), 1907, A., i, 968.

**1-Phenylpyrazole-4-azobenzene**, 3-*mono*- and 3:5-*di*-chloro- (Michaelis and Simon), 1905, A., i, 395.

**1-Phenylpyrazole-4-*p*-azotoluene**, 3-chloro-, and its 5-sulphide, 3:5-*di*-chloro-, and 3-chloro-5-iodo-, 3-thioalkyl, 3-methylsulphone, and 3-thiobenzoate (Michaelis and Simon), 1905, A., i, 395.

**1-Phenylpyrazole-3-carboxylic acid**, 5-chloro-, 4:5-*di*chloro-, and 5-chloro-4-bromo-, and their salts and derivatives (Michaelis and Walter), 1911, A., i, 1039.

**1-Phenylpyrazole-4-carboxylic acid** and *p*-bromo-, ethyl esters (Wislicenus and Breit), 1907, A., i, 967; (Wislicenus and Bywaters), 1907, A., i, 968.

**1-Phenylpyrazole-2′-carboxylic acid**, 5-chloro- (Michaelis and Ziesel), 1910, A., i, 513.

**5-Phenylpyrazole-3-carboxylic acid** and its ethyl ester, hydrazide, and hydrazine derivative (Bülow), 1904, A., i, 623.

**1-Phenylpyrazole-3:4-dicarboxylic acid** (Bauer and Dieterle), 1911, A., i, 922.

**1-Phenylpyrazole-3-glyoxylic acid**, 5-hydroxy-, ethyl ester, arylhydrazones of (Bülow and Göller), 1911, A., i, 1043.

**4-Phenylpyrazolidine-3:5-dicarboxylic acid** and its ethyl ester (Buchner and Perkel), 1904, A., i, 101.

**5-Phenyl-3-pyrazolidone**, 1-nitroso- (Muckermann), 1909, A., i, 839.
and its salts (Muckermann), 1911, A., i, 682.

**3-Phenylpyrazoline**, 5-imino-, and its salts (Moureu and Lazennec), 1907, A., i, 159.

**4-Phenylpyrazoline** and its salts (Buchner and Perkel), 1904, A., i, 101.
and its platinichloride (Oliveri-Mandalà), 1910, A., i, 433.

**Phenylpyrazoline ketone** (Azzarello), 1905, A., i, 941.

**3-Phenylpyrazoline-5-carboxylic acid** and its bromo-derivative (Bougault), 1909, A., i, 102.

**3-Phenylpyrazolone,** compound of trinitrobenzene and (Sudborough and Beard), 1910, T., 797.

**1-Phenyl-3-pyrazolone,** preparation of (Michaelis and Remy), 1907, A., i, 445.

**1-Phenyl-3-pyrazolone,** amino- (Kümmel and Remy), 1909, A., i, 423.

**1-Phenyl-5-pyrazolone,** *p*-bromo-3-hydroxy-, and 3-hydroxy- (Michaelis and Schenk), 1907, A., i, 966.
- 3-hydroxy- and its imide and 4-amino-derivative (Conrad and Zart), 1906, A., i, 608.
- nitro-, reduction of (Kümmel and Remy), 1909, A., i, 422.

**1-Phenyl-5-pyrazolone-4-azobenzene,** 3-chloro- and 3-chloro-5-thio-(Michaelis and Simon), 1905, A., i, 395.

**1-Phenyl-5-pyrazolone-4-*p*-azotoluene,** 3-chloro- and 3-chloro-5-thio- (Michaelis and Simon), 1905, A., i, 396.

**3-Phenylpyrazolone-1-carboxylamide** (Borsche and Spannagel), 1904, A., i, 779.

**1-Phenyl-5-pyrazolone-3-carboxylic acid** (Ruhemann), 1907, T., 1364; P., 196.

**1-Phenyl-5- and -*o*-3-pyrazolonecarboxylic acids,** anhydrides of (Michaelis), 1910, A., i, 512.

**1-Phenyl-5-pyrazolone-3:4-dicarboxylic acid,** 4-methyl ester, and its phenylhydrazide (Ruhemann), 1907, T., 1363; P., 196.

**1-Phenylpyrazoquinazoline,** 7-amino-, 7-chloro-, 4:7-*di*chloro-, and 7-hydroxy-, and its salts (Michaelis and Leo), 1910, A., i, 515.

**4-Phenylpyridazine** and its platinichloride (Stoermer and Fincke), 1909, A., i, 842.

**4-Phenylpyridazine,** *p*-hydroxy-, and its **-5-carboxylic acid** (Stoermer and Gaus), 1912, A., i, 1027.

**4-Phenylpyridazine-5-carboxylic acid** (Stoermer and Fincke), 1909, A., i, 842.

**3-Phenylpyridazine-6-carboxylic acid** (Paal and Dencks), 1903, A., i, 289.

**4-Phenylpyridazine-5:6-dicarboxylic acid** (4-*phenylcinnolinic acid*) and its barium and silver salts (Stoermer and Fincke), 1909, A., i, 842.

**1-Phenyl-5-pyridazinone-4-carboxylic acid** and its ethyl ester (Wislicenus, Böklen, and Reuthe), 1909, A., i, 10.

**1-Phenyl-6-pyridazinone-3-carboxylic acid** (Wislicenus and Waldmüller), 1911, A., i, 603.

**Phenylpyridazonanthrone** and 5-amino- and *p*-bromo- (Ullmann and van der Schalk), 1912, A., i, 387.

**Phenylpyridazonanthrone,** 4-amino-, and 4-chloro- (Ullmann and Minajeff), 1912, A., i, 388.

**Phenylpyridazonanthrone-*p*-sulphonic acid** and its sodium salt (Ullmann and van der Schalk), 1912, A., i, 387.

**Phenylpyridines,** oxidation of (Tschitschibabin), 1904, A., i, 524.

**Phenylpyridinium chloride** and *di*nitro-, and its products of change (Zincke), 1904, A., i, 448; (Zincke, Heuser, and Möller), 1904, A., i, 921.

**Phenylpyridinium chloride,** chloro- (Zincke and Würker), 1905, A., i, 242.
- 3-chloro-, and its platinichloride (Dieckmann), 1905, A., i, 411.
- *p*-chloro-3-hydroxy-, and its platinichloride (Dieckmann, Beck, and Szelinski), 1906, A., i, 110.
- 3-hydroxy-, and its additive salts (Zincke and Mühlhausen), 1906, A., i, 33; (König; Dieckmann, Beck, and Szelinski), 1906, A., i, 109.
- *di*nitro-, and its transformation products (Zincke), 1905, A., i, 467; (Zincke and Schreyer), 1907, A., i, 625.
  - action of aliphatic amines on (Zincke and Würker), 1905, A., i, 923.
  - action of secondary aromatic amines on (Zincke and Würker), 1905, A., i, 241.
  - action of, on benzidine and its sulphonic acids (Reitzenstein and Rothschild), 1906, A., i, 454.
  - action of hydrogen sulphide on (Zincke and Weisspfenning), 1912, A., i, 302.
  - action of, on mercuriated amines (Reitzenstein and Stamm), 1910, A., i, 348.
- 2:6-*di*nitro- (Borsche and Rantscheff), 1911, A., i, 331.
- 2:4:6-*tri*nitro-, preparation and derivatives of (Zincke), 1912, A., i, 303.
- 4:6-*di*nitro-3-amino- (Zincke and Weisspfenning), 1910, A., i, 586.

**Phenylpyridinium salts,** *m*-chloro-, and 3-chloro-2:4:6-*tri*bromo- (König), 1911, A., i, 485.

- **α-Phenyl-δ-4-pyridylbutadiene** and its aurichloride and mercurichloride (Proske), 1909, A., i, 413.
- **Phenylpyridylcarbinols**, α- and γ-, and their platinichlorides (Tschitschibabin), 1904, A., i, 523.
- **Phenylpyridyldimethylolmethanes**, 2- and 4-, and their salts (Tschitschibabin), 1904, A., i, 524.
- **α-Phenyl-β-pyridyl-ethylene glycol**, **-vinyl alcohol**, and **-ethanedione**, and their salts and acyl derivatives (Ladenburg and Kroener), 1903, A., i, 275.
- **α-Phenyl-α-2-** and **-4-pyridylethylenes** and their salts (Tschitschibabin), 1904, A., i, 524.
- **Phenyl-4-pyridylmethylolmethane** and its platinichloride (Tschitschibabin), 1904, A., i, 525.
- **2-Phenylpyrimidine**, 4-*mono*- and 4:5-*di*-amino-6-hydroxy-, and their salts (Traube and Herrmann), 1904, A., i, 633.
  - 5-bromo-4:6-*di*hydroxy-, and its acetates, and 4:6-*di*hydroxy- (Pinner), 1908, A., i, 1017.
  - 5-nitro- (Hale and Brill), 1912, A., i, 217.
- **4-Phenylpyrimidine**, 2-cyanoamino-6-hydroxy- (Pohl), 1908, A., i, 577.
- **Phenylpyrocinchonimide**, *p*-hydroxy- (Piutti and Abati), 1910, A., i, 674.
- **Phenylpyromykuric acid** and its barium salt (Baum), 1904, A., i, 910.
- **4-Phenyl-α-pyrone**, 6-hydroxy-, and its salts (Bland and Thorpe), 1912, T., 869.
- **6-Phenyl-2-pyrone-3-carboxylic acid**, ethyl ester (Claisen), 1904, A., i, 14.
- **6-Phenylpyrophthaline** and its *N*-alkyl derivatives (Gaebelé), 1904, A., i, 89.
- **6-Phenylpyrophthalone** and its bromo-derivatives and reduction product (Gaebelé), 1904, A., i, 89.
- **Phenylpyrrole**, compounds of, with formaldehyde and propaldehyde (Colacicchi and Bertoni), 1912, A., i, 653.
- **1-Phenylpyrrole**, 2:3:4:5-*tetra*chloro- (Okada), 1905, A., i, 875.
- **2-Phenylpyrrole-4:5-dicarboxylic acid** (Borsche and Spannagel), 1904, A., i, 779.
- **2-Phenylpyrrolidine** and its additive salts (Gabriel and Colman), 1908, A., i, 275.
- **1-Phenylpyrrolidine-2:5-dicarboxylic acid**, formation of, from adipic acid, and its methyl and ethyl esters, barium, and silver salts, and monoanilide (Le Sueur), 1909, T., 273; P., 36.
- **2-Phenylpyrroline** (Gabriel and Colman), 1908, A., i, 275.
- **Phenylpyruvic acid**, condensation of, with aldehydes (Erlenmeyer and Kehren), 1904, A., i, 1015; (Erlenmeyer and Braun), 1904, A., i, 1016.
  - condensation of, with benzaldehyde (Erlenmeyer), 1905, A., i, 784.
  - brucine salt (Hilditch), 1911, T., 235.
- **Phenylpyruvic acid**, *p*-chloro- (Friedmann and Maase), 1910, A., ii, 795.
  - *o*-hydroxy- (Erlenmeyer and Stadlin), 1905, A., i, 239.
  - *p*-hydroxy-, behaviour of, in the animal body (Kotake), 1911, A., ii, 59.
    - behaviour of, in the liver (Schmitz), 1910, A., ii, 984.
  - 2:5-*di*hydroxy-, and its anhydride, synthesis of (Neubauer and Flatow), 1907, A., i, 772.
- **2-Phenylquinazoline**, 4-hydroxy-, synthesis of (Pawlewski), 1903, A., i, 721.
- **3-Phenyl-4-quinazolone-2-carboxylic acid**, methyl and ethyl esters (Bogert and Gortner), 1910, A., i, 284.
- **2-Phenylquinoline** (Murmann), 1904, A., i, 818, 926.
  - salts of a monosulphonic acid of (Murmann), 1911, A., i, 157.
  - methochloride (Kaufmann and Plá y Janini), 1911, A., i, 916.
- **2-Phenylquinoline**, 3-(or 4-)bromo- (Freund and Speyer), 1905, A., i, 157.
  - 7-hydroxy- (Borsche), 1909, A., i, 53.
- **3-Phenylquinoline** derivatives (Hübner), 1908, A., i, 288.
- **1-Phenyl*iso*quinoline** and its hydrochloride and platinichloride (Pictet and Gams), 1910, A., i, 774.
- **3-Phenyl*iso*quinoline**, 1-chloro-4-hydroxy-, and its methyl and ethyl ethers, and 1:4-*di*chloro- (Ulrich), 1904, A., i, 529.
- **2-Phenylquinoline-3-carboxylic acid**, 4-hydroxy-, ethyl ester (v. Niementowski), 1905, A., i, 611; 1906, A., i, 39.

**2-Phenylquinoline-4-carboxylic acid,** ethylglycyl ester (Chemische Fabrik auf Aktien vorm. E. Schering), 1912, A., i, 1018.
  β-naphthyl and phenyl esters (Chemische Fabrik auf Aktien vorm. E. Schering), 1912, A., i, 582.
**9-Phenylquinothioxanthenyl,** chloride hydrochloride, 4-bromo-, bromide hydrobromide, and 4-chloro-, chloride hydrochloride (Gomberg and Cone), 1910, A., i, 870.
**2-Phenylquinoxaline-3-carboxylic acid** and hydroxy-, and its lactone (Fischer and Schindler), 1906, A., i, 609.
  ethyl ester, and its dianilide and disemicarbazone (Wahl), 1907, A., i, 217.
**Phenylquinoxalines,** synthesis of (Fischer and Römer), 1908, A., i, 694.
**Phenylquinoxanthenol,** bromide hydrobromide, *p*-bromo- (Cone and West), 1911, A., i, 806.
  chloride hydrochloride, and *p*-bromo- and *p*-chloro- (Gomberg and Cone), 1910, A., i, 56.
**3-Phenylrhodanic acid** (v. Braun), 1903, A., i, 15; (Andreasch and Zipser), 1903, A., i, 855.
  and its condensation with aldehydes, and *o*-hydroxy- (Andreasch and Zipser), 1905, A., i, 931.
***N*-Phenylrhodanine,** *p*-bromo- (Holmberg), 1910, A., i, 361.
**Phenylrosinduline,** *tri*hydroxy- (Kalle & Co.), 1905, A., i, 554, 840.
**Phenylrosindulines,** hydroxy- (Kalle & Co.), 1906, A., i, 314.
**Phenylsalicylaldoxime** (Plancher and Piccinini), 1905, A., i, 705.
**4-Phenylsalicylic acid,** *p*-hydroxy-, and its salts (Faure), 1905, A., i, 350.
**1-Phenyl-4-salicylidenehydantoin,** 2-thio- (Wheeler and Brautlecht), 1911, A., i, 501.
**3-Phenyl-4-salicylidene*iso*oxazolone,** acetyl derivative (Meyer), 1912, A., i, 1017.
**Phenylsalicylidene-*p*-phenylenediamine,** hydrochlorides of (Moore and Woodbridge), 1908, A., i, 686.
**Phenyl-selenious** and **-selenic acids** and their salts (Stoecker and Krafft), 1906, A., i, 568.
**Phenylsemicarbazide,** conditions of formation of (Milrath), 1908, A., i, 572.
**Phenylsemicarbazide,** action of, on phthalic anhydride (Dunlap), 1905, A., i, 830.
**Phenylsemicarbazide,** *p*-amino-, and its hydrochloride and benzylidene derivative (Borsche and Reclaire), 1907, A., i, 988.
**α-Phenylsemicarbazide.** See Phenylcarbamide, amino-.
**2-Phenylsemicarbazide** (Busch and Walter), 1903, A., i, 522.
**4-Phenylsemicarbazide,** action of carbodi-imides on (Busch and Blume), 1907, A., i, 261.
**Phenylsemicarbazide-α-carboxylic acid,** ethyl ester (Acree), 1904, A., i, 453.
**α-Phenylsemicarbazido-α-acetic acid** and its ethyl ester, and their δ-ethyl derivative (Busch, Schneider, and Walter), 1904, A., i, 97.
**4-Phenylsemithiocarbazide,** reaction of, with triphenylguanidine (Schall), 1903, A., i, 201.
**Phenylserine,** fate of, in the animal organism (Dakin), 1909, A., ii, 684.
**Phenylserines,** isomeric (Erlenmeyer and Barkow), 1906, A., i, 237.
**Phenylsilicon compounds** (Dilthey and Eduardoff), 1904, A., i, 464.
**Phenylstibinic acid,** *m*-amino-, and its derivatives (May), 1912, T., 1036; P., 5.
  *m*-nitro- (Morgan and Micklethwait), 1911, T., 2295; P., 274.
**α-Phenylstilbene** (Hell and Wiegandt), 1904, A., i, 490.
**α-Phenylstyrylacrylic acid,** methyl ester (Posner and Rohde), 1910, A., i, 848.
**β-Phenylstyryl anisyl ketone** and bromo- (Kohler), 1907, A., i, 1053.
***s*-Phenylstyrylcarbamide** (Forster), 1909, T., 439.
**Phenylstyryl*di*chloromethane** (Staudinger), 1909, A., i, 906.
**3-Phenyl-5-styryldihydro*iso*oxazole** and *di*bromo- (Ciusa and Terni), 1911, A., i, 918.
**3-Phenyl-2-styryl-4-dihydroquinazolone** (Bogert and Beal), 1912, A., i, 394.
**5-Phenyl-4-styryldihydrouracil** (Posner and Rohde), 1910, A., i, 848.
**δ-Phenyl-α-styrylfulgide** (Stobbe, Benary, and Seydel), 1911, A., i, 380.
**3-Phenyl-5-styryl-$\Delta^5$-*cyclo*hexenone** and its isomeride (Borsche), 1910, A., i, 683.
**Phenyl styryl ketone** (*benzylideneacetophenone*) (Mayer), 1905, A., i, 214.
  catalytic reduction of (Frézouls), 1912, A., i, 629.

**Phenyl styryl ketone** (*benzylideneacetophenone*), condensation of, with benzylideneaniline hydrocyanide (Clarke and Lapworth), 1907, T., 704; P., 90.
  addition of hydrogen cyanide to (Hann and Lapworth), 1904, T., 1355; P., 183.
  action of nitrous fumes on (Wieland), 1903, A., i, 765.
  action of magnesium phenyl bromide on (Kohler), 1903, A., i, 483.
  condensation of, with propiophenone (Abell), 1903, T., 360; P., 17.
  polymeride of (Wieland), 1904, A., i, 432.
  derivatives of (Abell), 1912, T., 998; P., 145.
  *di*bromide, and *p*-nitro-, action of alcoholic potash on (Ruhemann and Watson), 1904, T., 456; P., 48.
    *p*-nitro-, and its piperazine and acetal (Wieland), 1904, A., i, 432.
  hydrochloride and its compound with benzaldehyde and dipicrate (Vorländer, Rolle, and Siebert), 1905, A., i, 793.
  nitrate (Reddelien), 1912, A., i, 986.
  nitronitrite (Wieland), 1903, A., i, 766.
  α-, β-, and γ-semicarbazones (Heilbron and Wilson), 1912, T., 1482; P., 192.
**Phenyl styryl ketone**, amino- (Ruhemann and Watson), 1904, T., 1181, 1323; P., 176, 181.
  *m*- and *p*-amino-, and their acetyl derivatives and oxime, and oximido-oxime of the *p*-compound (Rupe and Porai-Koschitz), 1906, A., i, 754.
  5-amino-2-hydroxy-, *N*-mono- and tri-acetyl derivatives (Kunckell), 1904, A., i, 750.
  β-bromo-, action of alkalis and bases on (Watson), 1904, T., 1322; P., 181.
  *p*-bromo- (Kohler, Heritage, and Burnley), 1910, A., i, 563.
  5-chloro-2-hydroxy-, and its dibromide (Kunckell and Fürstenberg), 1912, A., i, 118.
  2-hydroxy-, action of hydrochloric acid on (Perkin, Robinson, and Turner), 1908, T., 1110.
  *op*-*di*hydroxy- (2′:4′-di*hydroxychalkone*) (Bargellini and Marantonio), 1908, A., i, 801.
  2:3:4-*tri*hydroxy- (Dutta and Watson), 1912, T., 1240; P., 106.
**Phenyl styryl ketone**, 2′:4′:2-*tri*hydroxy- (Göschke and Tambor), 1912, A., i, 195.
  2:4:4′:5′-*tetra*hydroxy-. See Butein.
  α-nitro- (Wieland), 1903, A., i, 767, 836.
  *m*-nitro- (Ruhemann), 1903, T., 1377; P., 246.
  β-*p*-*di*nitro- (Wieland), 1903, A., i, 767.
**Phenyl styryl ketoximes**, stereoisomeric (Henrich, Raab, and Ruppenthal), 1907, A., i, 324.
**5-Phenyl-2-styryloxazole** (Lister and Robinson), 1912, T., 1303.
**3-Phenyl-5-styryl*iso*oxazole** (Ciusa and Terni), 1911, A., i, 918.
**β-Phenyl-β-styrylpropiophenone** and its dibromide and oxime (Kohler), 1905, A., i, 358.
**1-Phenyl-5-styrylpyrazoline-3-propionic acid** (Rupe and Speiser), 1905, A., i, 351.
*s*-**Phenylstyrylsemicarbazide** (Forster), 1909, T., 439.
**1-Phenyl-3-β-styrylvinyl-5-anisylpyrazoline** (Bauer and Dieterle), 1911, A., i, 921.
**1-Phenyl-3-β-styrylvinyl-5-furylpyrazoline** (Bauer and Dieterle), 1911, A., i, 922.
**3-Phenyl-5-β-styrylvinyl*cyclo*hexan-5-ol-1-one-2-carboxylic acid**, ethyl ester (Borsche), 1910, A., i, 684.
**3-Phenyl-5-β-styrylvinyl-$\Delta^5$-*cyclo*hexen-1-one-2-carboxylic acid**, ethyl ester (Borsche), 1910, A., i, 685.
**Phenylsuccinamic acid**, amine salts of (Komatsu), 1909, A., i, 483.
**Phenylsuccinic acid** and its esterification, and potassium hydrogen salt and imide (Wegscheider and Hecht), 1903, A., i, 760.
  preparation of (Higson and Thorpe), 1906, T., 1471; P., 242.
  amide acids of (Anschütz and Walter), 1908, A., i, 542.
  ester- and amide-acids of (Anschütz, Hahn, and Walter), 1907, A., i, 766.
**Phenylsuccinic acid**, *o*- and *p*-nitro-, and *p*-amino-, acetyl derivative (Fichter and Walter), 1910, A., i, 29.
**Phenyl-succinic** and **-succinanilic acids**, and **-succinanil** and **-succino-*p*-tolil** (Hann and Lapworth), 1904, T., 1365; P., 183.
**Phenylsuccinic anhydride** (Dehn and Thorpe), 1906, T., 1882; P., 283.
**Phenylsulphinic acid**, *o*-nitro-, and its esters (Zincke and Farr), 1912, A., i, 764.

**Phenylsulphinous acid**, *o*-nitro-, esters (Zincke and Farr), 1912, A., i, 763.
**Phenylsulphohydrazide**, *di-o*-nitro- (Claasz), 1911, A., i, 695.
**Phenylsulphon-**. See Benzenesulphon-.
**Phenylsulphonamic acid**, chloroamino-, sodium salt (Seyewetz and Noel), 1908, A., i, 409.
**Phenylsulphoneacetic acid**, *o*-nitro-, ethyl ester (Claasz), 1912, A., i, 514.
and 2:4-*di*nitro-, and its lead salt (Claasz), 1912, A., i, 390.
*o*-**Phenylsulphonebenzoic acid**, 2′:4′-*di*nitro- (Mayer), 1910, A., i, 262.
β-**Phenylsulphone-αβ-diphenylpropionic acid** (Posner and Baumgarth), 1908, A., i, 21.
β-**Phenylsulphone-β-phenylpropionic acid** (Kohler and Reimer), 1904, A., i, 234.
and its ethyl ester, silver salt, amide, anilide, and *o*′-nitro-derivative (Posner and Baumgarth), 1908, A., i, 21.
β-**Phenylsulphone-β-*o*-, -*m*-,** and **-*p*-tolylpropionic acids** (Posner and Baumgarth), 1908, A., i. 22.
**Phenylsulphoxidephenylsulphonemethane** (Hinsberg), 1912, A., i, 546.
**Phenylsulphoxidoacetic acid** (Pummerer), 1909, A., i, 580.
and its ethyl ester (Pummerer), 1910, A., i, 468.
**Phenylsulphoxidoacetic acid**, *o*-chloro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 379.
*o*-nitro-, ethyl ester (Claasz), 1912, A., i, 514.
α-**Phenylsulphoxidopropionic acid** (Pummerer), 1910, A., i, 468.
**Phenylsulphuran**, *o*-nitro- (Claasz), 1912, A., i, 514.
α-**Phenyltarconine** (Freund and Lederer), 1911, A., i, 910.
**Phenyltartramic acid**, *m*-nitro-, compound with *m*-nitroaniline (Tingle and Burke), 1910, A., i, 21.
*p*-nitro- (Tingle and Burke), 1910, A., i, 22.
**Phenyltartronic acid**, methyl and ethyl esters (Guyot and Esteva), 1909, A., i, 237.
*N*-**Phenyltetra-acetylhelicinaldoxime** (Scheiber and Kloppe), 1911, A., i, 383.
**Phenyltetrahydroberberine** (Gadamer and Steinbrecher), 1911, A., i, 153.
2-**Phenyltetrahydronaphthalene** (Späth), 1912, A., i, 979.
**Phenyltetrahydro-oxazolone** (Schroeter), 1910, A., i, 431.
1-**Phenyltetrahydrophthalazine** and its additive salts and dibenzoyl derivative (Lieck), 1906, A., i, 51.
2-**Phenyltetrahydropyridine** and its additive salts (Gabriel), 1908, A., i, 649.
2-**Phenyl-1:4:5:6-tetrahydropyrimidine** and its salts (Branch and Titherley), 1912, T., 2342 ; P., 293.
**Phenyltetrahydropyrimidone** and its platinichloride (Gabriel), 1908, A., i, 181.
3-**Phenyltetrahydro-4-quinazolone**, 2-thio- (Freundler), 1904, A., i, 830.
1-**Phenyltetrahydro-2-quinoxalone**, 6-amino-, and its diacetyl derivative, and 6-nitro- (Reissert and Goll), 1905, A., i, 247.
9-**Phenyl-2:4:5:7-tetramethylacridine** (Ullmann and Weintraub), 1903, A., i, 519.
**Phenyltetramethyl*di*aminodiphenylmethane**, 2:5- and 5:2-aminohydroxy-, 2:5-*di*hydroxy-, and 2- and 5-hydroxylamino- (Prud'homme), 1907, A., i, 562.
**Phenyltetramethyl*di-p*-aminotriphenylmethylamine** (Villiger and Kopetschni), 1912, A., i, 1031.
1-**Phenyl-3:4:5:6-tetramethyl-1:2:7-benzotriazole** (Bülow and Haas), 1911, A., i, 88.
α-**Phenyl-ββδδ-tetramethylpentan-γ-one** (Haller), 1912, A., i, 270.
2-**Phenyl-3:4:4:6-tetramethyltetrahydro-1:3-oxazine** and its salts (Kohn), 1904, A., i, 934.
4-**Phenyltetraphenylethylene** and *tetra*nitro- (Norris, Thomas, and Brown), 1911, A., i, 32.
**Phenyltetrazinedimethylmalonylic acid** and its methyl ester and salts (Perkin), 1903, T., 1227.
2-**Phenyl-1-tetrazodiphenylglyoxaline** (Burián), 1904, A., i, 354.
5-**Phenyltetrazole**, 1-hydroxy-, and its benzoyl, *p*-toluenesulphonyl, and β-naphthalenesulphonyl derivatives (Forster), 1909, T., 186 ; P., 25.
1-**Phenyltetronic acid** (Dimroth and Eble), 1907, A., i, 57.
5-**Phenyltetronic acid** and its ammonium and sodium salts (Anschütz and Böcker), 1909, A., i, 730.
α-**Phenyl-α-thienylmethylcarbinol** (Thomas), 1908, A., i, 360.
**Phenylthioacetamide**, *p*-amino-, and the action of hydrazine hydrate on (Junghahn and Bunimowicz), 1903, A., i, 131.

**Phenylthioacetanilide** (Sachs and Loevy), 1904, A., i, 307.
**Phenylthioacetic acid** (Johnson, Bateman, Palmer, and Brautlecht), 1906, A., i, 954.
**Phenyl*di*thioallophanic acid**, methyl ester (Johnson and Elmer), 1903, A., i, 752.
**1-Phenylthioanthraquinone** (Decker and Wuersch), 1906, A., i, 689.
**1-Phenyl-3-thiobenzyl-1:2:4-triazole**, 5-amino-, synthesis of, and its diacetyl derivative (Fromm and v. Göncz), 1907, A., i, 873.
**1-Phenyl-3- and -5-thiobenzyl-1:2:4-triazoles**, 5- and 3-amino-, and their acetyl derivatives (Fromm and Schneider), 1906, A., i, 714.
**Phenylthiobiuret**, *p*-bromo- (Böeseken and Couvert), 1910, A., i, 645.
**Phenylthiocarbamic acid**, allyl, menthyl and benzyl esters (Roschdestvensky), 1910, A., i, 107.
  *n*-butyl ester (Douris), 1911, A., i, 950
**Phenyl*di*thiocarbamic acid**, phenylhydrazonium and piperidonium salts (Losanitsch), 1907, A., i, 694.
  phenyl ester (Rivier), 1907, A., i, 838.
**Phenylthiocarbamide**, solubility of, in water, influence of foreign substances on the (Bogdan), 1903, A., ii, 532.
  influence of inorganic salts on the solubility of (Biltz), 1903, A., ii, 358.
  reaction of, with acid chlorides (Dixon and Taylor), 1908, T., 20.
  action of nitrous acid on (Haager and Doht), 1906, A., i, 577.
**Phenylthiocarbamide**, amino- (Pellizzari), 1907, A., i, 874.
  reactions of (Rolla), 1908, A., i, 473.
  *o*-, *m*-, and *p*-amino-, and their salts (Frerichs and Hupka), 1903, A., i, 655.
**Phenyl*iso*thiocarbamide**, reaction of, with acetyl chloride and benzyl chlorocarbonate (Dixon and Hawthorne), 1907, T., 128.
**2-Phenylthiocarbamidoazo-*p*-toluene**, *m*-nitro- (Busch and Bergmann), 1905, A., i, 309.
**β-Phenylthiocarbamido-βδ-dimethylpentan-δ-ol** (Kohn), 1907, A., i, 899.
**1-Phenylthiocarbamido-2:5-dimethylpyrrole-3:4-dicarboxylic acid**, ethyl ester (Bülow and Sautermeister), 1906, A., i, 314.
**4-Phenylthiocarbamido-1-phenyl-5-methyl-3-pyrazolone** (Michaelis and Kotelmann), 1907, A., i, 155.
**1-Phenylthiocarbamido-2-phenyl-2:3-naphthaglyoxaline** (Franzen), 1906, A., i, 706.
**5-Phenylthiocarbamido-1-phenyl-3-*p*-tolyldihydroglyoxaline**, 2-thio- (Johnson and Burnham), 1912, A., i, 305.
**4-Phenylthiocarbamido-1-*p*-tolyl-5-methyl-3-pyrazolone** (Michaelis and Kotelmann), 1907, A., i, 156.
**Phenylthiocarbamylglycollanilide** (Holmberg), 1912, A., i, 132.
**Phenylthiocarbamylglycollic acid** and its salts (Holmberg), 1912, A., i, 132.
**Phenylthiocarbazinoacetic acid** and its ethyl ester (Busch and Meussdörffer), 1907, A., i, 449.
**Phenyl*di*thiocarbazinoacetic acid**, ethyl ester (Andreasch), 1907, A., i, 233.
**Phenylthiocarbimide** (*phenyl* iso*thiocyanate*), action of, on carbamide and thiocarbamide (Pieroni), 1912, A. i, 752.
  action of diphenylmethylenediamine on (Senier and Shepheard), 1909, T., 498.
  action of, on ethyl malonate and on ethyl cyanoacetate (Ruhemann), 1908, T., 621; P., 53.
  oxide, preparation and hydrolysis of (Fromm and Heyder), 1909, A., i, 911.
**5-Phenyl-1:2:3-thiodiazole** and its additive compounds and **4-carboxylic acid** and ethyl ester (Wolff, Kopitzsch, and Hall), 1904, A., i, 828.
  4-benzoyl derivative (Wieland and Bloch), 1906, A., i, 466.
**3-Phenyl-1:3:4-thiodiazole-5-one-2-anil** (Busch and Limpach), 1911, A., i, 334.
**Phenylthiodiazoline**, *endo*thio-, and its 5-methyl derivative (Busch and Schneider), 1903, A., i, 534.
***N*-Phenylthiodiphenylamine** (Barnett and Smiles), 1910, T., 364.
**Phenylthioglycol-*p*-arsinic acid** (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 452.
**Phenylthioglycollic acid.** See Phenylthiolacetic acid.
**Phenyl-ψ-thiohydantoin**, *m*-nitro- (Johnson), 1903, A., i, 581.
**Phenyl-ψ-thiohydantoinglyoxylic acid** (Wheeler and Jamieson), 1903, A., i, 522.
**Phenylthiolacetic acid**, preparation of (Kalle & Co.), 1908, A., i, 605.
  dibromide (Pummerer), 1909, A., i, 580.

**Phenylthiolacetic acid**, salts of (Parravano and Tommasi), 1909, A., i, 719.
  platinous salt (Ramberg), 1906, A., i, 792.
  ethyl and methyl esters (Pummerer), 1910, A., i, 468.
**Phenylthiolacetic acid**, *o*-amino-, and *o*-cyano- and its methyl ester and alkali salts (Friedländer and Laske), 1907, A., i, 335.
  *m*-amino-, acetyl derivative (Kalle & Co.), 1912, A., i, 452.
  *a*-chloro- (Pummerer), 1909, A., i, 581.
  2:4-*di*chloro- (Kalle & Co.), 1912, A., i, 354.
  3:4-*di*chloro- (Kalle & Co.), 1912, A., i, 557.
  *p*-chloro-*o*-cyano- (Kalle & Co.), 1909, A., i, 252.
  *o*-nitro-, and 2:4-dinitro- (Claasz), 1912, A., i, 389.
    ethyl ester (Claasz), 1912, A., i, 514.
  *o*- and *p*-nitro- and 2:4-*di*nitro-, preparation of (Kalle & Co.), 1908, A., i, 940.
*a*-**Phenyl-*a*-thiolalkyl-δ-dimethylpentan-γ-ones** (Posner), 1904, A., i, 323.
**Phenylthiolamine**, *o*-nitro-, and its derivatives (Zincke and Farr), 1912, A., i, 764.
*a*-**Phenylthiol-*a*-amyl-, -*a*-benzyl-, and -*a*-ethyl-thiolpropionic acids** (Posner and Hazard), 1903, A., i, 243.
**1-Phenylthiolanthraquinone** (Gattermann), 1912, A., i, 1002.
**1-Phenylthiolanthraquinone**, 4-amino-, and 4-thiocyano- (Gattermann), 1912, A., i, 1002.
**1-Phenylthiolanthraquinone-2-carboxylic acid**, *p*-chloro- (Badische Anilin- & Soda-Fabrik), 1912, A., i, 468.
**1-Phenylthiolanthraquinone-5, -6-, and -8-sulphonic acids** and their derivatives, potassium salts (Gattermann), 1912, A., i, 1002.
*o*-**Phenylthiolbenzoic acid**, new preparation of (Goldberg), 1905, A., i, 59.
*o*-**Phenylthiolbenzoic acid**, 4′- and 5′-chloro-2′-nitro-, 2′:4′-*di*nitro- and 2′:4′:6′-*tri*nitro- and their methyl esters (Mayer), 1910, A., i, 261.
*p*-**Phenylthiolbenzoic acid** (p-*phenylsulphidebenzoic acid*) and its barium salt (Weedon and Doughty), 1905, A., i, 346.
**Phenylthiolbenzoylbenzoic acid** and its ammonium salt (Scholl and Seer), 1911, A., i, 558.
**Phenylthiolbenzylacetoacetic acid**, ethyl ester (Ruhemann), 1905, T., 20.
**Phenylthiolbenzyl-acetone, -acetylacetone, -benzoylacetone, and -benzylideneacetone** (Ruhemann), 1905, T., 20.
**Phenylthiolbenzyl-acetophenone, -benzoylacetic acid**, ethyl ester, and **-deoxybenzoin** (Ruhemann), 1905, T., 464.
**4-Phenylthiolbenzyl-1-phenyl-3-methyl-5-pyrazolone** (Ruhemann), 1905, T., 467; P., 123.
**2-Phenylthiol-4-bromobenzoic acid** (Gomberg and Cone), 1910, A., i, 871.
**Phenylthiolcarbamic acid**, phenyl ester (Rivier), 1907, A., i, 837.
**Phenylthioldimethylamine**, *o*-nitro- (Zincke and Farr), 1912, A., i, 764.
**Phenylthiolglucoside and its tetra-acetyl** derivative (Fischer and Delbrück), 1909, A., i, 365.
**Phenylthiolglucosides** (Fischer and Delbrück), 1909, A., i, 365.
**Phenylthiol-2-hydroxybenzoic acid** (Hinsberg), 1903, A., i, 252.
**Phenylthiol-lactoside** and its hepta-acetyl derivative (Fischer and Delbrück), 1909, A., i, 366.
**Phenylthiolmethylamine**, *o*-nitro- (Zincke and Farr), 1912, A., i, 764.
**6-Phenylthiol-4-methyldihydro-2-pyrimidone**, *m*-*di*nitro- (Wheeler and McFarland), 1909, A., i, 970.
**Phenylthiolmethylimine**, *o*-nitro- (Zincke and Farr), 1912, A., i, 764.
**4-Phenylthiol-1-methylthiolanthraquinone** (Gattermann), 1912, A., i, 1003.
**Phenylthiol-*a*- and -β-naphthalides**, *o*-nitro- (Zincke and Farr), 1912, A., i, 764.
**2′-Phenylthiol-3:5-*di*nitrobenzoic acid** (*phenylsulphide-6′-carboxylic acid*, 2′:4′-di*nitro*-) *o*-hydroxy- (Mauthner), 1906, A., i, 448.
**Phenylthiolphenyldiphenetylsulphonium** platinichloride (Hilditch), 1911, T., 1096.
*a*-**Phenylthiolpropionic acid**, ethyl ester (Pummerer), 1910, A., i, 468.
**Phenylthioncarbamic acid**, phenyl ester (Rivier), 1906, A., i, 948.
*S*-**Phenylthionine**, hydroxy-, and its hydroxide and salts (Smiles and Hilditch), 1908, T., 1696.
*S*-**Phenyl*iso*thionine** chloride and hydroxide, hydroxy- (Smiles and Hilditch), 1908, T., 1699.
**Phenylthionoxamides** (Reissert), 1904, A., i, 991.
**Phenylthionylacetic acid**, *o*-nitro- (Claasz), 1912, A., i, 389.

**Phenylthiosemicarbazidecarbothionoxylic acid**, ethyl ester (Acree and Willcox), 1904, A., i, 270.

**8-Phenyl-α-*o*-thiosemicarbazinobenzoic acid**, potassium salt and anhydride of (Acree), 1907, A., i, 563.

**Phenylthiosulphonic acid**, *p*-iodo-, *p*-phenylenediamine salt (Tröger and Volkmer), 1905, A., i, 90.

**1-Phenyl-5-thiourazole** (Pellizzari and Laria-Botte), 1911, A., i, 336.

**9-Phenylthioxanthenol**, 4-bromo- (Gomberg and Cone), 1910, A., i, 871.

**9-Phenylthioxanthenyl** chloride and its derivatives, *per*chlorate, 4-bromo-, bromide and 4-chloro-, chloride (Gomberg and Cone), 1910, A., i, 870, 871.

**Phenyl-*p*-tolenylamidine**, benzoyl derivatives (Wheeler, Johnson, and McFarland), 1903, A., i, 859.

**Phenyltoluidines**, nitro-derivatives of (Reverdin and Crépieux), 1903, A., i, 248.
  2:4-*di*nitro- (Reitzenstein), 1903, A., i, 816.

**4-Phenyl-2-*p*-toluidinomethylthiazole** (Johnson and Burnham), 1912, A., i, 305.

**Phenyl-*p*-tolylacetic acid**, preparation of (Gyr), 1909, A., ii, 34.

**Phenyl-*p*-tolylallylcarbinol** (Kuzmin), 1910, A., i, 109.

**Phenyl-*o*-tolylamine**, *p*′-amino-*p*′-hydroxy- (Gnehm and Bots), 1904, A., i, 451.
  *pp*′-*di*hydroxy-, and its dibenzoyl derivative (Heller), 1912, A., i, 917.

**Phenyl-*p*-tolylamine** and its acetyl derivative (Goldberg and Sissoeff), 1908, A., i, 17.

**Phenyl-*p*-tolylamine**, 4-nitro- (Goldberg), 1907, A., i, 1027; (Ullmann), 1908, A., i, 457.
  2:4:6-*tri*nitro- (Ullmann and Nádai), 1908, A., i, 526.

**Phenyl-2′- and -4′-tolylamines**, 4-amino- and 4-nitro-, and their **2-sulphonic acids** (Ullmann and Dahmen), 1908, A., i, 976.

**Phenyl-*p*-tolyl-3:5-*endo*anilo-4:5-dihydro-1:2:4-triazoles**, 1:4- and 4:1- (Busch and Mehrtens), 1906, A., i, 118.

**10-Phenyl-9-tolylanthracene** (Guyot and Vallette), 1911, A., i, 653.

**Phenyl-*p*-tolylanthranilic acid** (Goldberg and Nimerovsky), 1907, A., i, 621.

**2-Phenyl-1-tolyl*iso*benzofuran** (Guyot and Vallette), 1911, A., i, 652.

**Phenyl-*p*-tolylbenzylethylphosphonium** salts (Wedekind), 1912, A., i, 43.

**δ-Phenyl-β-*m*-tolyl-α-benzylidenethiosemicarbazide** (Busch and Reinhardt), 1910, A., i, 76.

**Phenyl-*p*-tolylbenzylmethylphosphonium salts** (Pope and Gibson), 1912, T., 738.

**Phenyl δ-*p*-tolylbutadiene ketone** and its oxime (Scholtz and Wiedemann), 1903, A., i, 437.

**α-Phenyl-α-*p*-tolylbutane-αγδ-triol** (Kuzmin), 1910, A., i, 110.

**Phenyl-*p*-tolylcarbamide** (Marquis), 1907, A., i, 123; (Fromm, Roesicke, and Tausent), 1909, A., i, 506.

**Phenyl-*o*-tolylcarbinol** (Tschitschibabin), 1909, A., i, 919.

**α-Phenyl-β-*p*-tolylcinnamonitrile** (Bodroux), 1911, A., i, 545.

**6-Phenyl-2-*p*-tolyl-4-cinnamylpyridine**, 3-cyano- (v. Meyer and Irmscher), 1908, A., i, 912.

**Phenyl-*p*-tolyldicyanodiamide** (Fromm and Weller), 1908, A., i, 701.

**10-Phenyl-9-tolyldihydroanthracene**, 9:10-*di*hydroxy- (Guyot and Haller), 1911, A., i, 653.

**2-Phenyl-1-tolyl-1:2-dihydro*iso*benzofuran**, and 2-hydroxy- (Guyot and Vallette), 1911, A., i, 652.

**Phenyl-*p*-tolyldihydro-*p*-tolutriazine** (Busch and Bergmann), 1905, A., i, 309.

**4-Phenyl-1-*p*-tolyl-2:6-dimethylpyridinium** *per*chlorate (v. Baeyer and Piccard), 1911, A., i, 901.

**α-Phenyl-β-*o*-tolylethane**, β-imino-α-cyano-, and the formation of 1:3-diamino-2-phenylnaphthalene from (Atkinson, Ingham, and Thorpe), 1907 T., 588; P., 76.

**Phenyl-*p*-tolylethyl-ψ-carbamide** (Fromm, Roesicke, and Tausent), 1909, A., i, 506.

**α-Phenyl-α-*p*-tolylethylene** (Tiffeneau), 1907, A., i, 406.

**α-Phenyl-α-*p*-tolylethylene**, *o*-amino-, and its sulphate (Stoermer and Fincke), 1909, A., i, 841.

**Phenyltolylethyl-ψ-*di*thiobiuret** (Johnson and Cramer), 1903, A., i, 753.

**Phenyl-*p*-tolylglycidic acid** and its ethyl ester (Pointet), 1909, A., i, 234.

**Phenyl-*p*-tolylguanidothiocarbamide** and its hydrochloride (Fromm and Weller), 1908, A., i, 701.

**3-Phenyl-4-*p*-tolylidene*iso*oxazolone** (Meyer), 1912, A., i, 1019.

**3-Phenyl-5-tolylidenerhodanine** (Nägele), 1912, A., i, 795.

**Phenyl-*p*-tolyliodinium** hydroxide and salts, *p*-amino-, *N*-acetyl derivative (Willgerodt and Nägeli), 1907, A., i, 1025.

**Phenyl-*m*-tolyliodonium** hydroxide and salts (Willgerodt and Umbach), 1903, A., i, 744.

**Phenyl *m*-tolyl ketone,** sulphones of (Ullmann and Lehner), 1905, A., i, 290.

**Phenyl *m*-tolyl ketone,** 4-amino-, and 4:2′-*di*hydroxy-, and its tribromo-derivative (Auwers and Rietz), 1907, A., i, 939.

**Phenyl *p*-tolyl ketone,** *o*-amino- (Ullmann and Bleier), 1903, A., i, 176.

  *o*-nitro- (Kliegl), 1908, A., i, 550.

**Phenyl *m*-tolyl ketones,** amino-, and their acyl derivatives (Chattaway and Lewis), 1904, T., 590 ; P., 60.

**Phenyltolylmalonic acid,** ethyl ester (Guyot and Esteva), 1909, A., i, 237.

**Phenyl-*p*-tolylmethane,** *o*-nitro- (Kliegl), 1908, A., i, 550.

**Phenyl-*p*-tolylmethylallylphosphonium** iodide (Pope and Gibson), 1912, T., 737.

**Phenyl-*p*-tolylmethylcarbinol,** *o*-amino- (Stoermer and Fincke), 1909, A., i, 841.

**4-Phenyl-3-*p*-tolyl-6-methyldihydropyrazofurazan** (Michaelis and Risse), 1911, A., i, 1039.

**Phenyl-*p*-tolylmethylethylphosphonium** *d*-camphorsulphonate (Wedekind), 1912, A., i, 1043.

**Phenyl-*p*-tolylmethylpyrazoline** (Gattermann), 1906, A., i, 590.

**4-Phenyl-6-*p*-tolyl-2-methylpyridine,** 3-cyano- (v. Meyer and Irmscher), 1908, A., i, 911.

**3-Phenyl-2-*p*-tolyl-6-methylquinoline-4-carboxylic acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1019.

**Phenyltolylmethylsuccinic acid,** synthesis of (Eykman), 1905, A., i, 529.

**Phenyl-*p*-tolylmethylsulphine** iodide, amino- (v. Meyer and Heiduschka), 1903, A., i, 809.

**Phenyltolyl-*mono*- and -*di*-methyl-ψ-*di*-thiobiurets** (Johnson, Bristol, and Cramer), 1903, A., i, 752, 753.

**Phenyl-*p*-tolylmethyl-ψ-thiocarbamide** (Arndt), 1911, A., i, 919.

**Phenyl-*p*-tolyloxamide** (Heller and Emrich), 1904, A., i, 730.

**Phenyl-*p*-tolyloxamide,** *p*-iodo-, and 4:2′-*di*nitro- (Suida), 1910, A., i, 665.

**Phenyl-*o*- and -*m*-tolyloxamides** (Suida), 1910, A., i, 665.

**5-Phenyl-2-*o*-, -*m*-, and -*p*-tolyloxazoles** and picrate of the first (Lister and Robinson), 1912, T., 1300.

**Phenyl *p*-tolyl *p*-phenylene** *di*sulphide (Bourgeois and Fouassin), 1911, A., i, 964.

**Phenyl-*p*-tolylphosphoric acid** and isomeric *dl*- and *d*-hydrindamides, and *l*-menthylamides of (Luff and Kipping), 1909, T., 2001.

**Phenyl-*p*-tolylphosphoric amidine** (Caven), 1903, T., 1045 ; P., 200.

**Phenyl-*p*-tolylphosphoryl chloride** (Luff and Kipping), 1909, T., 2000.

**Phenyl-*p*-tolylphthalamide** (Tingle and Rolker), 1909, A., i, 29.

**Phenyltolylphthalazine** (Guyot and Vallette), 1911, A., i, 652.

**Phenyltolylphthalide,** *o*-hydroxy- (v. Baeyer), 1907, A., i, 759.

**Phenyltolylpiperidine** and its salts (Scholtz and Wiedemann), 1903, A., i, 436.

**β-Phenyl-β-*p*-tolylpropionic acid,** β-hydroxy-, and its salts (Kuzmin), 1910, A., i, 110.

**3-Phenyl-1-*o*-tolylpyrazole,** 5-chloro- (Michaelis and Leo), 1910, A., i, 515.

**3-Phenyl-1-*o*-tolyl-5-pyrazolone** (Michaelis and Leo), 1910, A., i, 515.

**2-Phenyl-6-tolylpyridine** and *iso*-**2-Phenyl-6-tolylpyridine** and their salts (Scholtz and Weidemann), 1903, A., i, 436.

**Phenyl-*p*-tolylpyrrolinophenazine** (Ruhemann), 1910, T., 1444.

**3-Phenyl-2-*p*-tolylquinoline-4-carboxylic acid** (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 1018.

**Phenyltolylsemicarbazides, 4:2- and 4:1-,** and their *di***thiocarboxylic acids,** methyl esters (Busch and Frey), 1903, A., i, 538.

**Phenyl-*o*-tolylsulphone** (Ullmann and Lehner), 1905, A., i, 290.

**Phenyl-*p*-tolylsulphone,** 4-iodo-, 4-iodoso-, and 4-iodoxy-, and derivatives (Willgerodt and Plockstíes), 1912, A., i, 256.

**4-Phenyl-3-*o*-, -*m*-, and -*p*-tolyl-2:3-thiazolines,** 2-thio- (v. Walther and Greifenhagen), 1907, A., i, 350.

**Phenyl-*p*-tolyl-ψ-thiocarbamide** and its salts and benzoyl derivative (Arndt), 1911, A., i, 919.
**Phenyl-*o*- and -*p*-tolylthiocarbamides** (v. Pawlewski), 1904, A., i, 237.
**5-Phenyl-1-*p*-tolylthiodiazoline,** *endo*-thio-, and its 4-benzyl derivative (Busch and Blume), 1903, A., i, 534.
**δ-Phenyl-β-*m*-, -α-*m*-, and -β-*o*-tolylthiosemicarbazides** (Busch and Reinhardt), 1910, A., i, 75.
**1-Phenyl-4-*p*-tolyl-3:5-*endo*toluidino-4:5-dihydro-1:2:4-triazole** (Busch and Mehrtens), 1906, A., i, 118.
**Phenyltrialkylammonium** iodides, electrolysis of (Emmert), 1909, A., i, 376.
**α-Phenyl-ααδ-trialkylsulphonepentanes** (Posner), 1904, A., i, 324.
**Phenyltriazen** and its reactions, stannichloride, copper and silver derivatives, and stereoisomeride (Dimroth), 1907, A., i, 653.
**Phenyltriazen,** *o*-, *m*-, and *p*-bromo-, and the copper derivative of the latter (Dimroth and Pfister), 1910, A., i, 904.
  β-cyano-, and its metallic derivatives (Wolff and Lindenhayn), 1904, A., i, 701.
**α-Phenyltriazen-β-thiocarbamide** and its methyl derivatives (Wolff and Lindenhayn), 1904, A., i, 701.
**5-Phenyl-1:2:4-triazine,** 3-chloro- and 3-hydroxy- (Wolff and Lindenhayn), 1904, A., i, 197.
  3-hydroxy- (Wolff, Bock, Lorentz, and Trappe), 1903, A., i, 205.
**1-Phenyl-1:3:5-triazine,** 3:5-*di*amino-, and its picrate (Rackmann), 1910, A., i, 897.
**2-Phenyl-1:3:5-triazine,** 4:6-*di*amino-, and its salts (Ostrogovich), 1911, A., i, 333.
**Phenyltriazoacetic acid** and its ethyl ester (Forster and Müller), 1910, T., 138; P., 4.
*s*-**Phenyl-β-triazoethylcarbamide** (Forster and Newman), 1911, T., 1281; P., 154.
*s*-**Phenyl-β-triazoethylthiocarbamide** (Forster and Newman), 1911, T., 1281; P., 154.
**1-Phenyl-1:2:3-triazole,** 5-amino-, and its **4-carboxylic acid,** and its potassium salt and ethyl ester (Dimroth and Werner), 1903, A., i, 129.
    and 5-chloro- (Dimroth, Marshall, and Hess), 1909, A., i, 268.
**1-Phenyl-1:2:3-triazole,** *p*-bromo-5-hydroxy-, and its **4-carboxylic acid** and its ethyl ester and metallic and amine salts (Dimroth and Stahl), 1905, A., i, 386.
  5-hydroxy-, and its reactions and derivatives (Dimroth), 1905, A., i, 99.
    and its **4-carboxylic acid,** and its salts and esters (Dimroth and Eberhardt), 1903, A., i, 128
**4-Phenyl-1:2:3-triazole** and its silver salt, hydrochloride and platinichloride (Oliveri-Mandalà and Coppola), 1910, A., i, 594.
**1-Phenyl-1:2:4-triazole,** picrate and nitrate (Pellizzari), 1911, A., i, 1036.
**1-Phenyl-1:2:4-triazole,** 3-(or 5-) thiol-, and its benzyl derivative (Fromm and Baumhauer), 1908, A., i, 703.
  3:5-*di*thiol- and its acetyl derivative and dibenzyl ether (Fromm and Schneider), 1906, A., i, 714.
  oxidation products of (Fromm and Baumhauer), 1908, A., i, 703.
**3-Phenyl-1:2:4-triazole,** 5-bromo- (Manchot), 1910, A., i, 442.
**2-Phenyl-1:3:4-triazole,** salts of (Pellizzari), 1911, A., i, 1035.
*C*-**Phenyl-*s*-triazole** and its additive salts, and acetyl- and carbamido-derivatives (Young), 1905, T., 625; P., 131.
**Phenyl-1:2:4-triazoles,** hydroxy- (Rupe and Labhardt), 1903, A., i, 537.
  synthesis of, and spatial hindrance (Rupe and Metz), 1903, A., i, 535.
**1-Phenyl-1:2:3-triazole-5-azo-β-naphthol** (Dimroth, Marshall, and Hess), 1909, A., i, 268.
**1-Phenyl-1:2:4-triazole-4-carboxylic acid,** 5-amino-, and its methyl ester (Dimroth), 1909, A., i, 267.
  5-chloro-, and its methyl ester (Dimroth, Marshall, and Hess), 1909, A., i, 268.
  5-hydroxy-, methyl ester, and its derivatives and keto-modification (Dimroth), 1905, A., i, 98, 383, 384; (Goldschmidt), 1905, A., i, 249.
**4-Phenyl-1:2:3-triazole-5-carboxylic acid** and its barium salt (Oliveri-Mandalà and Coppola), 1910, A., i, 594.
  hydrazide, azoimide, and urethane of (Dimroth, Marshall, and Hess), 1909, A., i, 268.

**1-Phenyl-1:2:4-triazole-3-carboxylic acid**, 5-hydroxy- (Rupe and Metz), 1903, A., i, 536.

**1-Phenyl-1:2:3-triazol-5-one**, 4-nitroso-, preparation of (Dimroth and Taub), 1907, A., i, 96; (Dimroth), 1907, A., i, 662.
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**1-Phenyl-1:2:4-triazolone**, 5-thio- (Rolla), 1908, A., i, 474.

**1-Phenyl-1:2:3-triazol-5-one-4-carboxylic acid** and its esters (Dimroth and Eberhardt), 1903, A., i, 127.

**1-Phenyl-1:2:3-triazol-5-one-4-carboxylic acid**, *p*-bromo-, and its ethyl ester and sodium salt (Dimroth and Stahl), 1905, A., i, 386.
*op*-*di*nitro-, ethyl ester (Dimroth and Aickelin), 1907, A., i, 159.

**Phenyltriazomalonic acid** and its ethyl ester and amide (Forster and Müller), 1910, T., 135; P., 4.

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*s*-**Phenyl-γ-triazopropyl-carbamide** and **-thiocarbamide** (Forster and Withers), 1912, T., 492.

**Phenyl*iso*triazoxolecarboxylic acid** and its silver salt, and *p*-chloro- (Perkin), 1903, T., 1223.

**Phenyl-1:2:4-triazylhydrazine** and its derivatives (Manchot), 1910, A., i, 442.

α-**Phenyltricarballylic acid** (Hecht), 1903, A., i, 700; (Wegscheider), 1911, A., i, 458.

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**4-Phenyl-3:4:5-trimethoxybenzylidene-1-methyl-3-pyrazolone** (Mauthner), 1908, A., i, 729.

**1-Phenyl-4(2′:4′:5′)-trimethoxybenzylidene-3-methyl-5-pyrazolone** (Fabinyi and Széki), 1906, A., i, 423.

**Phenyl-*N*-trimethylalanine**, methyl ester, platini- and auri-chlorides of (Engeland), 1910, A., i, 843.

**8-Phenyl-1:3:6-trimethylallantoin** (Biltz and Krebs), 1911, A., i, 242.

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**1-Phenyl-3:5:6-trimethyl-1:2:7-benzotriazole**, 4-hydroxy-, and its aurichloride (Bülow and Haas), 1911, A., i, 89.

**2-Phenyl-4:5:6-trimethyl-1:2-dihydropyridone**, 3-hydroxy- (Thole and Thorpe), 1911, T., 2241.

**Phenyltrimethylethylene** (Blaise and Courtot), 1906, A., i, 794.

α-**Phenyl-αδδ-trimethylfulgenic acid** (Stobbe and Gademann), 1911, A., i, 375.

δ-**Phenyl-ααδ-trimethyl-fulgenic acid** and **-fulgide** (Stobbe, Rose, and Gademann), 1905, A., i, 857.

α-**Phenyl-αδδ-trimethyl*allo*fulgenic acid** (Stobbe and Gademann), 1911, A., i, 375.

α- and δ-**Phenyl-αδδ-trimethylfulgide** (Stobbe and Gademann), 1911, A., i, 375.

**2-Phenyl-1:3:3-trimethyl-2-indolinol** and its salts (Jenisch), 1907, A., i, 240.

**Phenyl-2:4:5-trimethylphenylhydrazine**, 5-chloro-2-nitro- and 2:4-*di*- and 2:4:6-*tri*-nitro-, and their derivatives (Willgerodt and Herzog), 1905, A., i, 549.

**1-Phenyl-2:3:4-trimethylpyrazole**, 2:5-thio-. See Methylthiopyrine.

**1-Phenyl-3:4:5-trimethylpyrazole** (McConnan), 1904, A., i, 940.
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**1-Phenyl-2:4:4-trimethyl-3:5-pyrazolidone** (Perkin), 1903, T., 1225; (Michaelis and Schenk), 1909, A., i, 58.

**1-Phenyl-3:4:4-trimethylpyrazoline,** 5-hydroxy-, and conversion of, into 1-phenyl-3:4:5-trimethylpyrazole (Knorr and Jochheim), 1903, A., i, 528.

**1-Phenyl-2:3:4-trimethyl-5-pyrazolone,** 1-*p*-amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 135.

3-hydroxy- (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 257.

5-imino-, and its additive salts and benzoyl derivative (Stolz), 1904, A., i, 114.

*p*-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 78.

**1-Phenyl-2:4:5-trimethyl-3-pyrazolone.** See 4-Methyl-3-antipyrine.

**1-Phenyl-3:4:4-trimethyl-5-pyrazolone,** *p*-amino-, and *p*-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 1033.

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**2-Phenyl-4:4:6-trimethyltetrahydro-1:3-oxazine** and its salts and nitroso-derivative (Kohn), 1904, A., i, 933.

and its platinichloride and nitroso-derivative (Kohn), 1905, A., i, 929.

**1-Phenyl-3:4:4-trimethyl-5-thionpyrazolone** and its additive salts (Stoermer and Johannsen), 1907, A., i, 967.

**Phenyltrimethyltrinitroamine,** *s*-*tri*-nitro- (Blanksma), 1903, A., i, 624.

**4-Phenyltriphenylcarbinol** (Schlenk and Weickel), 1909, A., i, 791.

**4-Phenyltriphenylmethane** (Schlenk, Weickel, and Herzenstein), 1910, A., i, 237.

**4-Phenyltriphenylmethyl** and its *per*oxide (Schlenk, Weickel, and Herzenstein), 1910, A., i, 236.

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*s*-**Phenyltriphenylmethylcarbamide** (v. Meyer and Fischer), 1911, A., i, 120.

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*β*-**Phenylumbelliferone** (Bülow), 1903, A., i, 272.

**Phenyl undecyl ketone** (Haller and Bauer), 1909, A. i, 655.

**Phenyl undecyl ketone,** physical properties of (Eykman), 1904, A., i, 591.

**4-Phenyluracil** (Wheeler and Merriam), 1903, A., i, 525.

**5-Phenyluracil** (Wheeler and Bristol), 1905, A., i, 486.

**1-Phenylurazole,** constitution of (Acree), 1903, A., i, 867; (Acree and Laist), 1907, A., i, 796.

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**1-Phenylurazole,** 5-imino- (Pellizzari and Laria-Botte), 1911, A., i, 337.

3:5-*di*thiol- (Acree and Willcox), 1904, A., i, 270.

**Phenylurea,** fate of, in the dog (Salaskin and Kowalewsky), 1907, A., ii, 641.

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**Phenylurethane,** bromohydroxy-, chlorohydroxy-, and chlorobromohydroxy- (Upson), 1904, A., i, 735.

*m*-cyano- (Bogert and Beans), 1904, A., i, 584.

*p*-cyano- (Bogert and Wise), 1912, A., i, 450.

2-nitro-4-amino- (Curtius, Bollenbach, and Clemm), 1907, A., i, 1078.

**Phenylurethylcoumaran** (Stoermer and König), 1906, A., i, 200.

*ε*-**Phenyl-*n*-valeraldehyde** and its derivatives (v. Braun and Kruber), 1912, A., i, 266.

*α*-**Phenyl*iso*valeraldehyde** (Tiffeneau), 1906, A., i, 966.

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*α*-**Phenylvaleric acid.** See Phenylpropylacetic acid.

*β*-**Phenylvaleric acid,** *β*-amino- (Posner and Stirnus), 1912, A., i, 456.

*β*-hydroxy-, and its salts (Michnowitsch), 1905, A., i, 526.

*γ*-**Phenylvaleric acid** and its salts (Eykman), 1904, A., i, 669.

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*γ*-**Phenylvaleric acid,** *α*-bromo-, and its potassium salt (Kohler), 1905, A., i, 701.

*β*-imino-*α*-cyano-, ethyl ester, formation and constitution of (Atkinson and Thorpe), 1906, T., 1922; P., 282.

**δ-Phenylvaleric acid** and its methyl ester (BORSCHE), 1911, A., i, 880.

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**δ-Phenylvaleric acid,** α-amino-, and α-bromo-, and derivatives (V. BRAUN and KRUBER), 1912, A., i, 265.

*o*-amino-, *N*-benzoyl derivative of (V. BRAUN), 1907, A., i, 524.

α-cyano-, and its ethyl ester (BORSCHE), 1912, A., i, 264.

β-iodo-γ-hydroxy-, and γ-iodo-δ-hydroxy-, lactones of (BOUGAULT), 1908, A., i, 538.

**δ-Phenylvaleric acid hydrazide,** αβγδ-*tetra*bromo- (RIEDEL and SCHULZ), 1909, A., i, 582.

**δ-Phenylvaleronitrile** (V. BRAUN), 1910, A., i, 844.

**β-Phenylvalerophenone.** See γε-Diphenylpentan-ε-one.

**Phenyl-*dl*-valine,** 2:4-*di*nitro- (ABDERHALDEN and BLUMBERG), 1910, A., i, 371.

**Phenylvanillilosazones,** *p*-bromo- and *p*-nitro-, and their triacetyl derivatives (BILTZ and SIEDEN), 1903, A., i, 120.

**3-Phenyl-4-vanillylidene*iso*oxazolone** (MEYER), 1912, A., i, 1019.

**2-Phenyl-5-veratryloxazole** and its hydrochloride (ROBINSON), 1909, T., 2172 ; P., 295.

**2-Phenyl-4-veratrylphthalazone** (LAGODZINSKI), 1906, A., i, 82.

**γ-Phenylvinylacetic acid,** preparation of (FICHTER and ALBER), 1907, A., i, 87.

**Phenyl vinyl ketone** (*methyleneacetophenone*) and homologues of (KOHLER), 1909, A., i, 938.

**Phenyl vinyl ketone,** hydroxy-, conversion of, into benzoylpyruvic acid (MUMM and MÜNCHMEYER), 1911, A., i, 79.

*C*- and *O*-carbanilides of (DIECKMANN, HOPPE, and STEIN), 1905, A., i, 137.

**9-Phenylxanthen** (ULLMANN and ENGI), 1904, A., i, 682 ; (MEYER), 1905, A., i, 226.

**9-Phenylxanthen,** 3:6-*di*chloro-9-cyano- (POPE and HOWARD), 1911, T., 550.

**9-Phenylxanthen,** 9-chloro-2:8-*di*hydroxy-, and its derivatives (V. BAEYER, AICKELIN, DIEHL, HALLENSLEBEN, and HESS), 1910, A., i, 253.

3-hydroxy-, and its acetate and benzoate (KAUFFMANN and PANNWITZ), 1910, A., i, 394.

2:7-*di*hydroxy-, and its acyl derivatives, and their carbinols, and its ethers (MEYER and WITTE), 1908, A., i, 671.

3:6-*di*hydroxy- (POPE and HOWARD), 1910, T., 81.

**9-Phenylxanthen-9-carboxylic acid,** 3:6-*di*chloro-, and its ethyl ester (POPE and HOWARD), 1911, T., 550.

**9-Phenylxanthen-9-ol** (ULLMANN and ENGI), 1904, A., i, 682 ; (BÜNZLY and DECKER), 1904, A., i, 912.

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**9-Phenylxanthen-9-ol,** *p*-bromo-, salts of (CONE and WEST), 1911, A., i, 806.

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**Phenyl-xanthonium and -thioxanthonium** compounds (BÜNZLY and DECKER), 1904, A., i, 912.

**9-Phenylxanthonium,** 3:6-*di*amino-, diacetyl derivative, chromate, iodide and platinichloride (KEHRMANN and DENGLER), 1910, A., i, 406.

**9-Phenylxanthonium chloride,** 3:6-*di*amino-, diacetyl derivative (KEHRMANN and DENGLER), 1908, A., i, 1002.

3-amino-6-hydroxy-, and 3:6-*di*amino-, and their platinichlorides (KEHRMANN and DENGLER), 1910, A., i, 407.

3:6-*di*chloro- (POPE and HOWARD), 1911, T., 550 ; P., 52.

**9-Phenylxanthonium salts,** 2-hydroxy- (KROPP and DECKER), 1909, A., i, 249.

**9-Phenylxanthyl ethyl and methyl ethers,** 3:6-*di*chloro- (POPE and HOWARD), 1911, T., 551.

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**Phenyl-*m*-xylylamine** and its acetyl derivative (GOLDBERG and SISSOEFF) 1908, A., i, 17.

α- and **β-2-Phenyl-1-*o*-xylylene-6-methylpiperidinium** bromides and platinichlorides (Scholtz), 1910, A., i, 635.
**Phenyl-*p*-xylylhydrazine,** 5-chloro-2-nitro- and *op-di*nitro- (Willgerodt and Lindenberg), 1905, A., i, 551.
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**Phenyl-*m*-xylylsulphone,** 2:6-*di*nitro- (Karslake and Morgan), 1908, A., i, 410.
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**Phloridzin,** injection of, in the lactating cow (Porcher), 1904, A., ii, 500.
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  2-amino-, 1-methyl ether, hydrochloride and its tetra-acetyl derivative (Pollak and Gans), 1903, A., i, 252.

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  *tri*thio-, and its trimethyl ether, and triacetate (POLLAK and CARNIOL), 1909, A., i, 791.
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*a*-**Phocætaurocholic acid** (HAMMERSTEN), 1909, A., ii, 819.
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*iso***Phthalic acid**, 2-amino-, and its salts, acetyl, and azo-derivatives, and 2-nitro-, and its salts and methyl ester (Noelting and Gachot), 1906, A., i, 181.
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*o*-**Phthaliminobenzylphthalimidine** (Gabriel), 1912, A., i, 393.
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**γ-Phthaliminopropylpiperidine** and its picrate (v. Braun), 1909, A., i, 508.

**δ-Phthalimino-valeric acid** and its chloride and **-valerophenone** (Gabriel), 1908, A., i, 649.

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*as*-**Phthalyl chloride** (Ott), 1912, A., i, 830.

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*β*-**Phthalylalanine**, *α*-bromo- (Gabriel), 1907, A., i, 625.
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**Phthalylhydrazide**, *β*-amino- (Curtius), 1907, A., i, 969.
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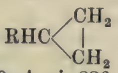
    of the type  $RHC<\begin{matrix}CH_2\\|\\CH_2\end{matrix}$ (Bruylants), 1909, A., i, 226.
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  - densities, magnetic rotations, and refractive powers of (Perkin), 1907, T., 837.
- **Propionacetal,** β-hydroxy-, oxidation of (Harries), 1904, A., i, 15.
- *d*-**Propionacetal,** α-amino-, and its picrate and normal oxalate (Fischer and Kametaka), 1909, A., i, 213.
- **Propionacetalylmalonic acid,** ethyl ester (Ellinger), 1905, A., i, 827.
- **Propionamide** hydrobromide (Werner), 1903, A., i, 235.
- **Propionamide,** α- and β-amino- (Franchimont and Friedmann), 1906, A., i, 71.
  - iodo- (Boismenu), 1912, A., i, 15.
  - α-nitro-, and its ammonium salt, and α-bromo-α-nitro-, and α-chloro-α-nitro- (Steinkopf and Supan), 1911, A., i, 4.
- **Propionamidophosphoryl** dichloride, α-*di*chloro- (Steinkopf, Bohrmann, Grünupp, Kirchhoff, Jürgens, and Benedek), 1910, A., i, 308.
- **Propionanilide.** See Aniline, propionyl derivative.
- **Propionatochromo-base,** salts of a green and of a violet (Weinland and Hoehn), 1911, A., i, 104.
- **Propione.** See Diethyl ketone.
- **Propionepinacone,** action of dilute sulphuric acid on (Kohn), 1905, A., i, 167.
- **Propionic acid,** latent heat of fusion and specific heat of (Massol and Faucon), 1909, A., ii, 791.
  - latent heat of vaporisation of (Luginin), 1903, A., ii, 7; (Faucon), 1908, A., ii, 257.
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  - preparation of anhydride of, and action of sulphur monochloride on silver salt (Denham), 1909, T., 1238; P., 179.
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- **Propionic acid,** ammonium salts (Reik), 1903, A., i, 308.

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- **Propionic acid,** α-iodo-, and its salts (Zernoff), 1904, A., i, 136, 216.
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  - α-nitro-, and its salts (Steinkopf and Supan), 1911, A., i, 4.
    - ethyl ester, and its sodium derivative (Ulpiani), 1903, A., i, 791.
  - ββ-*di*nitro-, methyl ester, and its potassium derivative (Meisenheimer and Schwarz), 1906, A., i, 618.
  - β-nitroamino-, and its salts and amide (Franchimont and Friedmann), 1907, A., i, 877.
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  - β-thiol-, disulphide (Friedmann), 1903, A., i, 75.
  - **Perpropionic acid** (Clover and Richmond), 1903, A., i, 397; (D'Ans and Frey), 1912, A., i, 602.
- *dl*-**Propionic acid,** α-iodo- (Abderhalden and Guggenheim), 1908, A., i, 887.
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- **Propionic** *per*oxide and its hydrolysis (Clover and Richmond), 1903, A., i, 397.
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- **Propionobromoiminoethyl ether** (Kuhara and Matsui), 1907, A., i, 1015.
- *l*-**Propionoxyisatin** (Heller and Sourlis), 1908, A., i, 208.
- **Propionyl chloride,** α- and β-chloro-, and their β-toluidides (Wolffenstein and Rolle), 1908, A., i, 282.
- *dl*-**Propionyl chloride,** α-iodo- (Abderhalden and Guggenheim), 1908, A., i, 887.
- **Propionyl** *di***sulphide,** thio- (Houben and Pohl), 1907, A., i, 475.
- **Propionylacetic acid,** γδ-*di*chloro-, ethyl ester (Schlotterbeck), 1909, A., i, 550.
- **Propionylacetophenone-*m*-hydroxanilide** (Bülow and Issler), 1904, A., i, 191.
- **Propionyl-*d*-alanine,** *d*-bromo- and *dl*-α-bromo- (Fischer and Schulze), 1907, A., i, 296.
- *l*-**Propionyl-*d*-alanine,** bromo- (Fischer and Raske), 1906, A., i, 457.
- **Propionyl-*l*-alanine,** *d*-bromo- (Fischer and Raske), 1907, A., i, 18.
- *dl*-**Propionyl-*dl*-alanine,** α-iodo-, and its ethyl ester (Abderhalden, Hirsch, and Guggenheim), 1911, A., i, 954.
- **Propionylamino-.** See under the parent Substance.
- **Propionylbenzene.** See Propiophenone.
- **Propionylbenzyl cyanide.** See Benzyl ethyl ketone, cyano-.
- **2-Propionyl-1-benzyl-2-methylpyrrolidone** and its oxime (Kühling and Frank), 1909, A., i, 955.
- **Propionylbenzylpropionic acid,** ethyl ester (Dieckmann and Kron), 1908, A., i, 389.
- α-*N*-**Propionyl-3:5-*di*bromo-2-hydroxybenzylphenylhydrazine** (Auwers, Hirt, and Müller), 1909, A., i, 224.
- γ-**Propionylbutyric acid** and its esters, oxime, and semicarbazone (Blaise and Maire), 1908, A., i, 392.
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- **Propionylcampholic acid,** ethyl ester, and its semicarbazone (Haller and Weimann), 1907, A., i, 278.
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- **Propionylcarbamide** (Merck), 1904, A., i, 380.

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**3-Propionyl*iso*carbostyril**, 4-hydroxy-, and its phenylhydrazone (Kolshorn), 1904, A., i, 676.

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*o*-**Propionyl-*p*-cresol**, α-chloro-, and its semicarbazone (Auwers), 1912, A., i, 485.

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*d*-**Propionyldiglycylglycine**, α-bromo- (Abderhalden and Hirszowski), 1908, A., i, 888.

**4-Propionyl-2:3-dimethyl-5-ethylpyrrole** (Fischer and Bartholomaus), 1912, A., i, 646.

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**2-Propionyl-2-ethyl*cyclo*pentanone** (Blaise and Kœhler), 1910, A., i, 627.

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*dl*-**Propionylglycine**, α-iodo-, and its ethyl ester (Abderhalden, Hirsch, and Guggenheim), 1911, A., i, 954.

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*l*-**Propionylglycylglycine**, bromo- (Fischer), 1906, A., i, 810.

*d*-**Propionylglycyl-*l*-leucine**, α-bromo- (Abderhalden and Fodor), 1912, A., i, 951.

*d*-**Propionylglycyl-*l*-tyrosine**, α-bromo- (Fischer), 1907, A., i, 901.

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**δ-Propionyl-*n*-heptoic acid**, and its derivatives (Blaise and Kœhler), 1910, A., i, 627.

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*d*-**Propionyl-*d*-*iso*leucine**, α-bromo- (Abderhalden, Hirsch, and Schuler), 1909, A., i, 770.

α-*d*-**Propionyl-*l*-leucylglycine** (Abderhalden and Fodor), 1912, A., i, 951.

*d*-**Propionyl-*l*-leucyl-*d*-*iso*leucine**, α-bromo- (Abderhalden and Hirsch), 1910, A., i, 720.

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**4-Propionyl-2-methylanisole** and its oxime (Klages), 1904, A., i, 1002.

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**3-Propionyl-1-methyl-$\Delta^2$-*cyclo*hexene** and its semicarbazone (Wallach and Rentschler), 1908, A., i, 405.

**2-Propionyl-2-methyl*cyclo*pentanone** (Blaise and Kœhler), 1910, A., i, 627.

- *o*-**Propionyloxybenzoic acid**, α-bromo- (Chemische Fabrik von Heyden), 1909, A., i, 798.
- **2-Propionyl***cyclo***pentanone** and its methyl and ethyl derivatives (Blaise and Kœhler), 1909, A., i, 479.
  - salts and derivatives of (Blaise and Kœhler), 1910, A., i, 627.
- **Propionylphenylacetamide** (Dimroth and Feuchter), 1903, A., i, 630.
- **Propionylphenylacetic acid**, ethyl ester, action of phosphorus pentabromide on (Dimroth and Feuchter), 1903, A., i, 631.
  - and the action of phosphorus pentachloride on (Dimroth and Feuchter), 1903, A., i, 629.
- **Propionylphenylacetylene** and the action of hydroxylamine on (Moureu and Brachin), 1904, A., i, 95.
  - reaction of, with magnesium methyl iodide (Brachin), 1907, A., i, 129.
- *p*-**Propionylphenylcarbamide** (Kunckell), 1911, A., i, 990.
- **Propionyl-***N***-phenylglycine**, α-bromo-, and its methyl ester (Fischer and Gluud), 1909, A., i, 888.
- **Propionylphosphamic chloride**, *di*-α-chloro- (Steinkopf and Benedek), 1908, A., i, 963.
- **Propionylpropionic acid**, ethyl ester, derivatives of (Emmerling and Kristeller), 1906, A., i, 623.
- α-**Propionylpropionic acid**, α-cyano-, ethyl ester (Baron, Remfry, and Thorpe), 1904, T., 1752.
  - α′-cyano-, ethyl ester (Thorpe), 1912, T., 257.
- β-**Propionylpropionic acid** and its semicarbazone and ethyl ester (Maire), 1908, A., i, 248.
- **Propionylpyruvic acid** and its ethyl ester (Diels, Sielisch, and Müller), 1906, A., i, 438.
- **Propionylserine**, α-bromo- (Fischer and Roesner), 1910, A., i, 658.
- **Propionyltolyl methyl ethers** and their oximes (Klages), 1904, A., i, 1003.
- **Propionyltropeine**, αβ-*di*bromo- and α- and β-chloro-, and their additive salts (Wolffenstein and Rolle), 1908, A., i, 282.
- *d*-**Propionyl-***l***-tyrosine**, α-bromo-, and its ethyl ester, and α-bromo-3:5-*di*iodo- (Abderhalden and Hirszowski), 1908, A., i, 888.
- *dl*-**Propionyl-***l***-tyrosine**, iodo-derivatives (Abderhalden and Guggenheim), 1908, A., i, 887.
- **Propionyl***iso***valeryl.** See Ethyl *iso*butyl diketone.
- **Propionyl-***d***-valine**, *d*-α-bromo- (Fischer and Scheibler), 1908, A., i, 958.
- **Propionylveratrole**, α-amino- (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 314.
- **Propiophenone** (*phenyl ethyl ketone: propionylbenzene*), physical properties of (Eykman), 1904, A., i, 591.
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- **Propiophenone**, *p*-amino-, and its derivatives (Kunckell), 1911, A., i, 990.
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  - β-chloro-, and αβ-*di*bromo- (Kohler), 1909, A., i, 939.
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  - 2:4:5-*tri*hydroxy-4:5-dimethyl ether. See 3:4-Dimethoxypropiophenone, 6-hydroxy-.
- **Propiophenone-***o***-carboxylic acid** and its reactions (Daube), 1905, A., i, 210.
- **Propiophenone-***o***-carboxylic acid**, 3:4-*di*bromo- (Simonis and Arand), 1909, A., i, 933.
- **Propiophenoneoxime-***o***-carboxylic acid**, anhydride of (Daube), 1905, A., i, 210.
- **Propiophenonyl-carbamide** and **-phenylthiocarbamide** (Gabriel), 1908, A., i, 181.
- **Propolis** (Greshoff and Sack), 1903, A., i, 602.
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*o*- and *p*-*iso***Propoxybenzoic acid**, menthyl esters of (Cohen and Dudley), 1910, T., 1743.
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*o*-**Propoxybenzyl bromide**, *di*bromo- (Auwers, Hirt, and Müller), 1909, A., i, 223.
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*a*- and *b*-*o*-**Propoxycinnamamide** (Stoermer, Friderici, Bräutigam, and Neckel), 1911, A., i, 296.
*a*- and *b*-*o*-**Propoxycinnamic acid** (Stoermer, Friderici, Bräutigam, and Neckel), 1911, A., i, 296.
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*b*-**Propoxyphenylpropionic acid** (Stoermer, Friderici, Bräutigam, and Neckel), 1911, A., i, 296.
**β-Propoxy-β-phenylpropionic acid** (Schrauth, Schoeller, and Struensee), 1911, A., i, 642.
*m*-**Propoxy-β-phenylpropionic acid** (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 865.
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**6-Propoxy-2-propylquinol** (Thoms), 1903, A., i, 558.
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*n*-**Propyl alcohol**, behaviour of solutions of, towards semi-permeable membranes (Findlay and Short), 1905, T., 819; P., 170.
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*iso***Propyl alcohol**, αα-*di*bromo-, preparation of (Freundler), 1907, A., i, 174.
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  *di*chloro-, and its benzoyl derivative (Wohl and Roth), 1908, A., i, 942.
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  *aci-di*nitro-, and its potassium salt (Duden and Ponndorf), 1905, A., i, 558.
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- **Propyl** cuprocyanide (Guillemard), 1908, A., i, 720.
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    - preparation of (van Hove), 1907, A., i, 173.
    - compound of, with nitric acid (Cohen and Gatecliff), 1904, P., 195.
    - *mono*chloro-, β-chloro-αβ-*di*bromo-, and *tetra*chloro-, and their derivatives (Oddo and Cusmano), 1911, A., i, 942.
  - iodide, condensation of, with ethyl acetoacetate, by calcium ethoxide (Perkin and Pratt), 1909, T., 162.
  - iodochloride (Thiele and Peter), 1905, A., i, 736.
  - oxide, *di*hydroxy- (Nef), 1905, A., i, 5.
  - sulphite and its sodium salt (Rosenheim and Sarow), 1905, A., i, 404.
- *iso***Propyl** carbamate, ββ-*di*chloro- (*aleudrin*), pharmacological action of (Maass), 1912, A., ii, 967.
  - ether, formation of, from isopropyl alcohol by sulphuric acid (Southerden), 1904, P., 117.
  - iodide, action of, on magnesium (Tschelinzeff), 1904, A., i, 641.
- *n*- and *iso***Propyl** bromides, equilibrium isomerism on heating (Faworsky), 1907, A., i, 741.
  - α-naphthylcarbamates (Neuberg and Kansky), 1909, A., i, 690.
- *iso***Propylacetaldehyde.** See *iso*Valeraldehyde.
- *cyclo***Propylacetic acid** and its salts (Demjanoff and Dojarenko), 1908, A., i, 156.
- *iso***Propylacetoacetaldehyde** and its copper salt (Couturier and Vignon), 1905, A., i, 571.
- *n*-**Propylacetoacetamide** (Guareschi), 1905, A., i, 822.
- *iso***Propylacetone.** See Methyl *iso*butyl ketone.
  - β-nitroso-. See Methyl β-nitroso*iso*butyl ketone.
- α-*iso***Propyl-γ-acetylbutyric acid** and its semicarbazone (Schimmel & Co.), 1910, A., i, 758.
- β-*iso***Propyl-γ-acetylbutyric acid** and its semicarbazone and oxime (Wallach), 1911, A., i, 310.
- *cyclo***Propylacetyl***cyclo***propane** and its semicarbazone (Michiels), 1912, A., i, 259.
- α-**Propylacraldehyde** and its semicarbazone (Sommelet), 1907, A., i, 109.
- α-**Propylacrylic acid** and its ester and potassium salt (Blaise and Luttringer), 1905, A., i, 628.
- α-*iso***Propylacrylic acid** and its ethyl ester and dibromide (Blaise and Luttringer), 1905, A., i, 628.
- **Propyl acyl-δ-aminobutyl ketones** and their oximes and semicarbazones (v. Braun and Steindorff), 1905, A., i, 812.
- α-*iso***Propyladipic acid** (Blanc), 1905, A., i, 683.
  - methyl ester (Kötz and Schüler), 1907, A., i, 58.
- β-*iso***Propyladipic acid** (Wallach and Challenger), 1911, A., i, 472.
- *r*-β-*iso***Propyladipic acid**, preparation of (Blanc), 1908, A., i, 245.
- *cyclo***Propylaldehyde** and its semicarbazone (Demjanoff and Fortunatoff), 1907, A., i, 1032.
- *p*-*iso***Propylallylbenzene** (Kunckell), 1903, A., i, 617.
- **Propylallylmalonic acid**, β-hydroxy-, and its silver salt (Johnson and Hill), 1911, A., i, 503.
- **Propylamine** *per*oxide, preparation of (Kurowski and Nissenmann), 1911, A., i, 608.
- **Propylamine**, β-bromo- and *di*bromo-, hippuryl derivatives (Diels and Beccard), 1907, A. i, 57.
- *iso***Propylamine**, oxidation of (Bamberger and Seligman), 1903, A., i, 323.
- *n*-**Propylaminoacetal** and its derivatives (Paal and van Gember), 1908, A., i, 511.
- **Propylaminoacetic acid**, menthyl ester (Frankland and O'Sullivan), 1911, T., 2335; P., 319.
- **Propylaminoacetonitrile**, cyano- (v. Braun), 1907, A., i, 900.
- **Propylamino***cyclo***hexane** and its phenylcarbamide (Sabatier and Mailhe), 1912, A., i, 103.
- **Propylammonium** nitrite (Rây and Rakshit), 1911, P., 291; 1912, T., 141.
  - palladi-bromide and -chloride (Gutbier and Woernle), 1907, A., i, 88.
  - selenibromide (Gutbier and Grünewald), 1912, A., i, 241.
  - telluri-bromide and -chloride (Gutbier, Flury, and Micheler), 1911, A., i, 182.
  - tungstate (Ekeley), 1909, A., i, 556.
- *iso***Propylammonium** rutheni-bromide and -chloride (Gutbier and Leuchs), 1911, A., i, 183.

*iso***Propylammonium** telluri-bromide and -chloride (Gutbier, Flury, and Micheler), 1911, A., i, 182.
*n*- and *iso*-**Propylammonium** iridichlorides (Gutbier and Lindner), 1909, A., ii, 1026.
  iridi-chlorides and -bromides (Gutbier and Riess), 1910, A., i, 97.
  osmichloride (Gutbier and Maisch), 1911, A., i, 91.
  platinibromide (Gutbier and Bauriedel), 1910, A., i, 12.
**Propyl*iso*amylamine** (Sabatier and Mailhe), 1909, A., i, 293.
**Propyl-*n*-amylcarbinol** and its acetate (Pexsters), 1907, A., i, 376.
*iso***Propyl-*n*-amylcarbinol** and its derivatives (Pickard and Kenyon), 1912, T., 629.
*cyclo*- and *iso*-**Propyl*iso*amylcarbinols** (Michiels), 1912, A., i, 259, 260.
γ-*cyclo***Propyl-$\Delta^{\beta}$-amylene** (Bruylants), 1909, A., i, 228.
**Propyl amyl ketone** and its semicarbazone (Bouveault and Locquin), 1905, A., i, 18.
*iso***Propyl *n*-amyl ketone** (Pickard and Kenyon), 1912, T., 629.
*cyclo***Propyl *iso*amyl ketone** and its semicarbazone (Michiels), 1912, A., i, 259.
*iso***Propylanhydroacetonebenzils**, α- and β- (Japp and Knox), 1905, T., 673 ; P., 152.
**Propylaniline**, nitroso- (König and Becker), 1912, A., i, 496.
*o*-**Propylaniline**, β-chloro-, and its *N*-benzoyl derivative (v. Braun and Steindorff), 1905, A., i, 81, 156.
  γ-chloro-, and its salts (v. Braun and Steindorff), 1905, A., i, 294.
  *N*-naphthoyl derivative of (v. Braun), 1905, A., i, 236.
*p*-**Propylaniline**, γ-chloro-, and its derivatives (v. Braun and Deutsch), 1912, A., i, 845.
*iso***Propylaniline**, 2:4-*di*- and 2:4:6-*tri*-nitro-, synthesis of (Mulder), 1906, A., i, 492.
*n*-**Propylanilopyrines**, 2- and ω-, and their derivatives (Michaelis and Mielecke), 1908, A., i, 62.
*p*-**Propylanisole** and its nitro-compound and **sulphonic acid** (Henrard), 1907, A., i, 411.
**Propylanisoles**, *p*-, *n*-, and -*iso*- (Klages), 1904, A., i, 1001.
**2-*n*-Propylanthranol-9** (Scholl, Potschiwauscheg, and Lenko), 1911, A., i, 1008.
**2-*n*-Propylanthraquinone**, and 1-amino-, 1-iodo-, and 1-nitro- (Scholl, Potschiwauscheg, and Lenko), 1911, A., i, 1008.
**2-*iso*Propylanthraquinone**, and 1-amino-, 1-iodo-, and 1-nitro- (Scholl, Potschiwauscheg, Lenko, and Böcker), 1911, A., i, 1009.
**2-*n*-Propylanthrone-9** (Scholl, Potschiwauscheg, and Lenko), 1911, A., i, 1009.
**2-*iso*Propylanthrone-9** (Scholl, Potschiwauscheg, Lenko, and Böcker), 1911, A., i, 1009.
*n*-**Propylarsinic acid** and its magnesium salt and *n*-**Propylarsine** disulphide (Dehn and McGrath), 1906, A., i, 341.
**5-Propylbarbituric acid** (*5-propylmalonylcarbamide*), 4-imino- (Conrad), 1905, A., i, 751.
*iso***Propylbenzamarone** (Klages and Tetzner), 1903, A., i, 101.
*o*-**Propylbenzanilide**, γ-chloro- (v. Braun), 1904, A., i, 918.
*o*-*iso***Propylbenzanilide**, β-chloro- (v. Braun and Kirschbaum), 1912, A., i, 500.
*n*-**Propylbenzene** (Klages), 1903, A., i, 329.
  equilibrium of, with antimony trichloride (Menschutkin), 1911, A., i, 532.
  formation of acetophenones from derivatives of (Mameli, Bonn, and Bignami), 1909, A., i, 721.
*n*-**Propylbenzene**, *p*-amino-, *p*-iodoso-, and *p*-iodoxy- (Willgerodt and Sckerl), 1903, A., i, 746.
  benzoyl derivative (Schultz and Peri), 1909, A., i, 898.
  γ-bromo- (Rupe and Bürgin), 1910, A., i, 161.
  αβ-*di*bromo- (Kunckell and Dettmar), 1912, A., i, 431.
  βγ-*di*bromo- (Ageewa), 1905, A., i, 776.
  β-bromo-α-hydroxy- (Mameli and Brocca), 1909, A., i, 714.
  β-bromo-α-3:4-*tri*hydroxy-, acetate of (Böttcher), 1909, A., i, 154.
  *di*-γ-bromo-γ-nitro-, and γ-nitro- (v. Braun and Kruber), 1912, A., i, 266.
  γ-chloro- (Merck), 1912, A., i, 175.
  αβγγ-*tetra*chloro- (Clarke), 1910, T., 898 ; P., 96.
    and γγ-*di*chloro-αβ-*di*bromo- (Charon and Dugoujon), 1903, A., i, 240.
  β-chloro-α-3:4-*tri*hydroxy- (Böttcher), 1909, A., i, 154.

*n*-**Propylbenzene**, β-imino-γ-cyano-, preparation of, and formation of 1:3-naphthylenediamine from (Best and Thorpe), 1908, P., 283.

γ-iodo- (v. Braun), 1910, A., i, 844.

*p*-iodo-, containing multivalent iodine, derivatives of (Willgerodt and Sckerl), 1903, A., i, 746.

6-nitro-3:4-*di*hydroxy- (Thoms and Biltz), 1904, A., i, 399.

*d*-**Propylbenzene**, α-chloro- (Pickard and Kenyon), 1911, T., 71.

*iso***Propylbenzene**. See Cumene.

*n*-**Propylbenzenesulphonamide** (Schultz and Führer), 1909, A., i, 899.

*n*-**Propylbenzo***cyclo***heptadienone** (Thiele and Weitz), 1910, A., i, 854.

4-*n*-**Propylbenzophenone-2′-carboxylic acid** (Scholl, Potschiwauscheg, and Lenko), 1911, A., i, 1008.

4-*iso***Propylbenzophenone-2′-carboxylic acid** (Scholl, Potschiwauscheg, Lenko, and Böcker), 1911, A., i, 1009.

2-*iso***Propylbenzopyronium** ferrichloride (Decker and v. Fellenberg), 1909, A., i, 117.

*cyclo***Propylbenzylamine** and its salts (Kijner), 1911, A., i, 989.

*p*-*iso***Propylbenzylidene**-*p*-**aminobenzoic acid** (Manchot and Furlong), 1910, A., i, 34.

*p*-*iso***Propylbenzylidenebisphenylanilinoacetamide** (Minovici and Zenovici), 1912, A., i, 700.

*p*-*iso***Propylbenzylidenebisphenylchloroacetamide** (Minovici and Zenovici), 1912, A., i, 700.

*p*-*iso***Propylbenzylidenebisphenylphenylhydrazinoacetamide** (Minovici and Zenovici), 1912, A., i, 700.

α-*p*-*iso***Propylbenzylidenedeoxybenzoin** and its isomeride (Klages and Tetzner), 1903, A., i, 101.

*iso***Propylbenzylidenedi***iso***amyl ether** (Franzen and Zimmermann), 1907, A., i, 661.

**Propylbenzylidene-3-methyl***cyclo***hexanone**, rotation of (Haller), 1903, A., i, 564.

4-*iso***Propylbenzylidenerhodanic acid** (Bargellini), 1906, A., i, 536.

4-*iso***Propylbenzylidenerhodanic acid**, 3-nitro- (Pizzuti), 1911, A., i, 62.

4-*p*-*iso***Propylbenzyl***iso***quinoline** and its salts (Rügheimer and Albrecht), 1903, A., i, 440.

α-**Propylberberine** hydriodide (Freund and Mayer), 1907, A., i, 633.

**Propylboric acid** (Khotinsky and Melamed), 1909, A., i, 864.

**Propyl-ε-bromoamylcyanamide**, γ-bromo- (v. Braun), 1909, A., i, 507.

**Propyl-ε-bromoamylimine**, γ-bromo-, hydrobromide (v. Braun), 1909, A., i, 507.

1-*iso***Propyl-4-**αβ-*di***bromopropylbenzene** (Kunckell and Dettmar), 1912, A., i, 432.

1-*iso***Propyl-2-***cyclo***butanone** and its semicarbazone (Lebedeff), 1911, A., i, 775.

β-**Propyl-**$\Delta^{\beta}$**-butenoic acids**, *n*- and *iso*-, γ-cyano- (Guareschi), 1907, A., i, 1004.

*iso***Propyl***iso***butenylbenzene** (Schubert), 1903, A., i, 626.

**Propyl***iso***butylacetic acid**. See α-*iso*-Butylvaleric acid.

**Propyl***iso***butylcarbinol** and its acetate (Muset), 1907, A., i, 375.

*iso***Propyl-***n***-butylcarbinol**, and resolution of, and its derivatives (Pickard and Kenyon), 1912, T., 629.

and its acetate (Muset), 1907, A., i, 374.

*iso***Propyl***iso***butylcarbinol** (Michiels), 1912, A., i, 260.

*cyclo***Propylbutylcarbinol** (Michiels), 1911, A., i, 63.

*cyclo***Propyl***iso***butylcarbinol** (Michiels), 1911, A., i, 63.

*cyclo***Propylbutylcarbinyl** bromide (Michiels), 1911, A., i, 63.

β-*cyclo***Propyl-**$\Delta^{\beta}$**-butylene** (Bruylants), 1909, A., i, 228.

*iso***Propyl** *n***-butyl ketone** and its semicarbazone (Pickard and Kenyon), 1912, T., 628.

**Propyl** *iso***butyl ketone**, semicarbazone of (Bouveault and Locquin), 1905, A., i, 18.

*cyclo***Propyl butyl ketone** (Michiels), 1911, A., i, 63.

*cyclo***Propyl** *iso***butyl ketone** (Michiels), 1911, A., i, 63.

**Propyl***iso***butylmalonic acid** and its ethyl ester (Fischer, Holzapfel, and v. Gwinner), 1912, A., i, 157.

*iso***Propyl***iso***butylsuccinic acids** (*nonanedicarboxylic acids*), *cis*- and *trans*- (Beatty), 1903, A., i, 726.

isomeric, and their salts and anhydrides (Fichter and Glaser), 1908, A., i, 660.

α-*iso***Propylbutyric acid**, β-hydroxy- (Wogrinz), 1903, A., i, 604.

synthesis of, and ethyl ester and salts (Matschurevitsch), 1910, A., i, 89.

**Propylbutyrylacetic acids**, *n*- and *iso*- ethyl esters (Locquin), 1904, A., i, 552.

**Propyl-camphol** and its acetate and -camphor (Haller and Minguin), 1906, A., i, 594.

**Propylcamphor,** cyano-, isomeric, and their rotation (Haller), 1903, A., i, 503.

*iso***Propylcamphor,** hydroxy- (Malmgren), 1903, A., i, 103.

*C*-**Propylcamphorcarboxylic acid,** methyl ester, and its isomeride (Haller), 1903, A., i, 503.

*iso***Propylcarbamide** (Conduché), 1903, A., i, 155.

*O*-**Propyl***iso***carbamide** and its hydrochloride (Stieglitz and Noble), 1905, A., i, 639.

*iso***Propylcarbamidecarboxylic acid,** ethyl and methyl esters (Mauguin), 1911, A., i, 358.

*n*- and *iso*-**Propylcarbazoles** and their picrates (Levy), 1912, A., i, 304.

*cyclo***Propylcarbinol** (*trimethylenecarbinol*) and its derivatives, preparation and properties of (Demjanoff and Fortunatoff), 1907, A., i, 1032.

  and its acetate (Michiels), 1911, A., i, 63.

*cyclo***Propylcarbinyl ethyl ether** (Michiels), 1911, A., i, 64.

**Propylcarbithionic acid.** See *n*-Butyric acid, *di*thio-.

**3-***iso***Propyl***iso***carbostyril,** 4-hydroxy- (Ulrich), 1904, A., i, 529.

**Propylcarbylamine** (Guillemard), 1908, A., i, 719.

**2-Propylcarveol.** See 2-Propyl-$\Delta^{6:8(9)}$-menthadien-2-ol.

**Propylcatechol,** dichloromethylene ether, action of potassium hydroxide on (Delange), 1907, A., i, 700.

**Propylcatechol,** *di*chloro-, cyclic carbonates of (Barger), 1908, T., 2081 ; P., 237.

*iso***Propylcatechol** and its carbonate and dichloromethylene ether (Delange), 1904, A., i, 741.

**5-Propylcatechol** carbonate (Delange), 1904, A., i, 314.

**Propylcatecholmethylenedisulphonic acid** (Delange), 1907, A., i, 700.

*p*-*iso***Propyl-**α**-chlorobenzyldeoxybenzoin** (Klages and Tetzner), 1903, A., i, 101.

*cyclo***Propyl chloromethyl ketone** (Michiels), 1911, A., i, 63.

*n*-**Propyl** β**-chloropropylene ether** (Oddo and Cusmano), 1911, A., i, 942.

**Propyl***tri***chlorosilicane** (Melzer), 1908, A., i, 967.

β-*n*-**Propylcinnamic acid** (Schroeter), 1907, A., i, 531 ; (Schroeter and Buchholz), 1908, A., i, 170.

  and its ethyl ester (Tiffeneau), 1907, A., i, 406.

**1-Propylcitronellol** (Austerweil and Cochin), 1910, A., i, 572.

**Propylcoumaric acid.** See *a*-*o*-Propoxycinnamic acid.

**Propylcoumarinic acid.** See *b*-*o*-Propoxycinnamic acid.

**4-***iso***Propyl-***m***-cresol,** α-hydroxy- (Hoering and Baum), 1909, A., i, 572.

**6-***iso***Propyl-***m***-cresol,** α-hydroxy- (Hoering and Baum), 1909, A., i, 571.

**Propylcyanoacetamide** (Guareschi), 1903, A., i, 737.

**2-Propyl-***p***-cymene** and its optical constants and **sulphonic acid** and its derivatives (Klages), 1907, A., i, 598.

*iso***Propyl-***n***-decylcarbinol** and rotation and derivatives of (Pickard and Kenyon), 1912, T., 629.

*iso***Propyl** *n***-decyl ketone** (Pickard and Kenyon), 1912, T., 629.

**Propyldiallylcarbinols,** *n*- and *iso*- (Saytzeff, Petroff, Musuroff, Chowansky, Andréeff, Chonowsky, and Luniak), 1907, A., i, 815.

α-**Propyldihydroberberine** and its hydriodide (Merck), 1907, A., i, 436 ; (Freund and Mayer), 1907, A., i, 633.

**2-Propyldihydro***iso***indole,** and its derivatives (Scholtz and Wolfrum), 1910, A., i, 773.

*o*-**Propyldimethylaniline** and its salts (Emde), 1912, A., i, 801.

*p*-*iso***Propyldimethylaniline.** See *N*-Dimethylcumidine.

*cyclo***Propyldimethylcarbinol** and its chloride, bromide, iodide, and acetate (Bruylants), 1909, A., i, 227.

  transformations of (Kijner and Klawikordoff), 1911, A., i, 635.

**4-***iso***Propyldiphenyl-2:3′-dicarboxylic acid** (or 3-isopropyldiphenyl-2′:4′-dicarboxylic acid), and its methyl ester and silver salt (Lux), 1908, A., i, 874.

**4-***n***-Propyldiphenylmethane-2′-carboxylic acid** (Scholl, Potschiwauscheg, and Lenko), 1911, A., i, 1008.

**4-***iso***Propyldiphenylmethane-2′-carboxylic acid** (Scholl, Potschiwauscheg, Lenko, and Böcker), 1911, A., i, 1009.

*iso***Propyldiphenyl-1:1′:2′-tricarboxylic acid**, 3-hydroxy- (Bucher), 1910, A., i, 239.

**Propylene**, formation of, from trimethylene (Tanatar), 1903, A., i, 1.
  preparation of (Senderens), 1910, A., i, 649.
  derivatives (Henry), 1903, A., i, 725.
    aromatic (Hell and Bauer), 1903, A., i, 242, 479.
  bromide (*αβ-dibromopropane*), action of, on the disodium derivative of diacetylacetone (Bain), 1907, T., 544; P., 77.

**Propylene**, *di*amino-, *N*-dibenzoyl derivative of (Inouye), 1907, A., i, 482.
  *αα-di*chloro-, action of sodium on (Smedley), 1906, P., 158.
  *ααα-tri*chloro- (Vitoria), 1905, A., i, 110; (Henry), 1905, A., i, 559.

**Propylene chlorohydrins** (Henry), 1903, A., i, 2, 725.

**Propylene glycol.** See Propane, *di*hydroxy-.

**Propylene oxide** and the corresponding hydroxychloroacetate (Prileschaeff), 1910, A., i, 86.
  action of hydrogen chloride on (Michael), 1906, A., i, 781.
  action of magnesium ethyl bromide on (Henry), 1907, A., i, 887.

**Propylene ozonide** (Harries and Haeffner), 1908, A., i, 846.

*αβ*-**Propylene phthalate**, γ-chloro- (Weinschenk), 1906, A., i, 91.

**Propylenecatechol**, bisethoxymethyl ether of (Hoering and Baum), 1909, A., i, 572.

**Propylenecatechol**, *tri*bromo-, diacetate, ethers and dibromide of (Hoering), 1907, A., i, 412.

**Propylenediamine** and its *N*-dibromo- and -dichloro-derivatives and their *s*-diacyl compounds (Chattaway), 1905, T., 388; P., 61.
  *N*-diacetyl derivative, and its oxalate (Haga and Majima), 1903, A., i, 291.
  dibenzoyl derivative (Windaus and Knoop), 1905, A., i, 381.
  compounds of, with chromium salts (Pfeiffer, Basci, Gassmann, Haimann, and Trieschmann), 1906, A., ii, 616.
  and ethylenediamine, compounds of, with chromium and cobalt salts (Pfeiffer, Gassmann, and Pietsch), 1908, A., i, 508.

**Propylenediamine**, compounds of, with cobalt salts, stereoisomeric (Werner and Fröhlich), 1907, A., i, 590.
  compounds of, with cobalt salts and thiocyanic acid (Werner and Dawe), 1907, A., i, 294.
  compounds with palladium (Gutbier and Woernle), 1906, A., i, 805.
  nickel platinoso-chloride and sulphate (Tschugaeff and Karasseff), 1907, A., i, 830.
  telluribromide (Gutbier, Flury, and Ewald), 1912, A., i, 689.

*d*-**Propylenediamine** and derivatives of the optically active propylenediamines (Tschugaeff and Sokoloff), 1909, A., i, 137.

*l*-**Propylenediamine**, complex salts of (Tschugaeff and Sokoloff), 1907, A., i, 896.

**Propylenediammonium** auri-bromide and -chloride (Gutbier and Obermaier), 1911, A., i, 424.
  iridichloride (Gutbier and Lindner), 1909, A., ii, 1026.
  iridi-chloride and -bromide (Gutbier and Riess), 1910, A., i, 98.
  osmichloride (Gutbier and Maisch), 1911, A., i, 19.
  platinibromide (Gutbier and Bauriedel), 1910, A., i, 13.
  selenibromide (Gutbier and Grünewald), 1912, A., i, 242.

**3:3′-Propylenedibenzo***spiro***pyran** (Borsche and Geyer), 1912, A., i, 893.

**Propylenedicarboxylic acids.** See Citraconic acid, Glutaconic acid, Itaconic acid, and Mesaconic acid.

**Propyleneguanidine.** See 4-Methyltetrahydroglyoxaline, 2-imino-.

**Propylenemethylal** (Clarke), 1912, T., 1804.

**Propylenepentacarboxylic acid.** See Dicarboxyaconitic acid.

**1-***iso***Propylene-2-***cyclo***pentanone** (Bonsdorff), 1912, A., i, 34.

*o*-**Propylenephenol** (Hoering and Baum), 1909, A., i, 571.

*β*-**Propylene***cyclo***propane** (*dimethylmethylenetrimethylene*) (Alexéeff), 1905, A., i, 639.

**Propylenetetracarboxylic acid.** See Dicarboxyglutaconic acid.

**Propylenetricarboxylic acid.** See Aconitic acid and α-Carboxy-$\Delta^{\alpha\beta}$-glutaconic acid.

*α*-**Propyl-***β***-ethylacrylic acid.** See β-Ethyl-α-propylacrylic acid.

*cyclo***Propyl-ethyl- and -***iso***propyl-carbinols and their acetates** (Bruylants), 1909, A., i, 227.

*cyclo***Propyl ethyl and** *iso***propyl ketones** (Bruylants), 1909, A., i, 227.

*cyclo***Propylethylpropylcarbinol** and its bromide (Michiels), 1911, A., i, 63.

**4′-***iso***Propylflavone,** 6-hydroxy- (v. Kostanecki and Kolker), 1907, A., i, 952.

**4′-***iso***Propylflavonol,** 7-*mono*- and 7:8-*di*-hydroxy-, and their diacetates (v. Kostanecki and Tobler), 1907, A., i, 952.

*iso***Propylformal,** *s-tetra*chloro-, crystals of (Stappers), 1905, A., i, 261; (Cesàro), 1905, A., i, 570; (Henry), 1905, A., i, 634; (Kaisin), 1906, A., i, 5.
  *hexa*chloro- (Henry), 1905, A., i, 559.

**Propylformals,** *n*- and *iso*-, chloro-derivatives (Stappers), 1905, A., i, 261.

*β-iso***Propyl glucoside** (Bourquelot and Bridel), 1912, A., i, 946.

*α-iso***Propylglutaric acid** (*hexanedicarboxylic acid*) (Wallach, Collmann, and Thede), 1903, A., i, 568.

*β-iso***Propylglutaric acid** (Noyes and Doughty), 1905, A., i, 321.

*iso***Propylglutaric acids,** *α*- and *β*- (Blanc), 1905, A., i, 682.

**β-Propylglycerol** *αγ*-diethyl ether (Sommelet), 1907, A., i, 108.

**4-Propylglyoxaline,** *γγγ-tri*chloro-*β*-hydroxy-, and its salts (Gerngross), 1909, A., i, 189.

**Propylguaiacol** and its carbonate and benzoyl derivative (Parrain), 1907, A., i, 43.

*d*- and *l*- *iso***Propylheptanonolide** (Barbier and Grignard), 1910, A., i, 555.

**5-Propylhexahydro-2-pyrimidone,** 4:6-*di*imino- (Merck), 1906, A., i, 537.

*iso***Propylhexamethylene.** See Normenthane.

**1-***iso***Propyl***cyclo***hexanol** (Auwers and Ellinger), 1912, A., i, 188.

**1-***iso***Propyl***cyclo***hexan-2-one** (Bouveault and Chereau), 1906, A., i, 513.
  and its **1-carboxylic acid,** ethyl ester, and their semicarbazones (Kötz and Michels), 1907, A., i, 58.

**1-***iso***Propyl***cyclo***hexan-4-one,** *ω*-hydroxy- (Perkin), 1904, T., 670; P., 86.

*n***-Propyl-**$\Delta^1$**-***cyclo***hexene** and its nitrosochloride, nitrolpiperidide, and methoxyloxime and semicarbazone (Wallach, Churchill, and Rentschler), 1908, A., i, 405.

*iso***Propyl-**$\Delta^1$**-***cyclo***hexene** and its nitrosochloride and oxime (Wallach and Mallison), 1908, A., i, 406.

**1-***iso***Propyl***cyclo***hexen-2-one** and its semicarbazone (Wallach and Mallison), 1908, A., i, 406.

**1-***iso***Propyl-**$\Delta^1$**- and -**$\Delta^2$**-***cyclo***hexen-4-ones** and their semicarbazones (Wallach and Heyer), 1908, A., i, 425.

*α-iso***Propyl-***n***-hexoic acid,** *l-δ*-hydroxy-, formation and oxidation of, and its lactone (Tutin), 1907, T., 272; P., 29.

*iso***Propyl-***n***-hexylcarbinol** and rotation and derivatives of (Pickard and Kenyon), 1912, T., 629.

*cyclo*- and *iso*-**Propyl***iso***hexylcarbinols** (Michiels), 1912, A., i, 259.

*iso***Propyl** *n***-hexyl ketone** (Pickard and Kenyon), 1912, T., 629.

*cyclo***Propyl** *iso***hexyl ketone** (Michiels), 1912, A., i, 259.

**α-Propylhydracrylic acids,** *n*- and *iso*-, and their salts, ethyl ester, phenylhydrazide, and phenylurethane (Blaise and Luttringer), 1905, A., i, 505.

**1-Propylhydrocotarnines,** *n*- and *iso*-, and their additive salts (Freund and Reitz), 1906, A., i, 601.

**α-Propylhydrohydrastinine** and its salts (Freund and Lederer), 1911, A., i, 907.

*iso***Propylhydrohydrastinine** and its salts (Freund and Lederer), 1911, A., i, 907.

**Propyl α-hydroxybutyl ketone** (*butyroin*) and its derivatives (Bouveault and Locquin), 1905, A., i, 560, 572; 1906, A., i, 783.

*iso***Propyl α-hydroxy***iso***butyl ketone** (iso*butyroin*) and its oxime (Bouveault and Locquin), 1906, A., i, 783.

**Propylidene diacetate** (Wegscheider and Späth), 1910, A., i, 155.

**Propylideneacetic acid** and its ethyl ester, action of nitrogen peroxide on (Egoroff), 1904, A., i, 216.

*iso***-Propylideneacetoacetaldehyde** and its copper salt (Couturier), 1910, A., i, 299.

**Propylidene-acetoacetic** and **-bisacetoacetic acids,** menthyl esters, rotation of (Hann and Lapworth), 1904, T., 51.

*iso***Propylideneacetone.** See Mesityl oxide.

*β-iso***Propylideneanhydroacetonebenzil** and its acetyl derivative (Japp and Knox), 1905, T., 673; P., 152.

*iso***Propylidene-***p***-benzoquinone,** bromo-derivatives (Zincke), 1906, A., i, 737.

**Propylidenebishydrazobenzene** (Rassow and Baumann), 1910, A., i, 79.

**Propylidenebisoxalacetic acid,** ethyl ester, and its phenylhydrazone, semicarbazone, and hydrate, and dianhydride (Gault), 1907, A., i, 181.

**Propylidenebisurethane,** β-chloro-, and β-chlorobromo- (Oddo and Cusmano), 1911, A., i, 943.

*iso***Propylidene***tetra***bromoquinone,** *p*-*di*bromo- (Zincke and Grüters), 1906, A., i, 172.

**Propylidenecamphor** and its nitrosate (Haller and Minguin), 1906, A., i, 595.

**Propylidenediacetamide** (Reich), 1905, A., i, 35.

**Propylidenedimalonic acid,** ethyl ester, and its disodium derivative (Kötz), 1907, A., i, 706.

**Propylidene***cyclo***hexane** and its nitrosochloride, nitrolpiperide, and methoxyloxime (Wallach, Churchill, and Rentschler), 1908, A., i, 405.

*iso***Propylidene***cyclo***hexane** (Wallach and Mallison), 1908, A., i, 406.

**4-*iso*Propylidene*cyclo*hexanone** and its semicarbazone and β-bromo-, and their **2-carboxylic acids,** ethyl esters, synthesis of (Perkin and Simonsen), 1907, T., 1736; P., 197.

**Propylidenemalonic acid,** ethyl ester (Kötz), 1907, A., i, 706.

**Propylidenephosphamic chloride,** αββ-*tri*chloro- (Steinkopf and Benedek), 1908, A., i, 963.

γ-*iso***Propylidenepimelic acid** and its ethyl ester and reactions (Perkin and Simonsen), 1907, T., 1743; P., 198.

*n*- and *iso***Propylidenetetramethyl***di***aminodiphenylmethane** (Lemoult), 1911, A., i, 399.

*iso***Propylidenetriazoacetohydrazide** (Curtius and Bockmühl), 1912, A., i, 426.

*iso***Propylidene-γ-triazobutyrohydrazide** (Curtius and Giulini), 1912, A., i, 427.

*iso***Propylidene-α-triazopropionohydrazide** (Curtius and Franzen), 1912, A., i, 426.

**2-Propylimino-4-methyluracil,** chloro- (Majima), 1908, A., i, 223.

**3-*iso*-Propylindolinone** and its methyl ethyl and acetyl, dibromo-, and silver derivatives (Schwarz), 1903, A., i, 854.

**Propylmalonamide** (Conrad and Zart), 1905, A., i, 754.

**Propylmalonic acid,** α-bromo-γδ-*di*hydroxy-, dilactone of, and γδ-*di*hydroxy-, amide, dilactone, and bisphenylhydrazide of (Leuchs and Splettstösser), 1907, A., i, 177.

**Propylmalonic acid,** γδ-*di*hydroxy- (Traube), 1905, A., i, 13.

*iso***Propylmalonic acid,** ethyl ester, sodium derivative, action of monochloromethyl ether on (Simonsen), 1908, T., 1777; P., 212.

*iso***Propylmalonic acid,** α-bromo-, ethyl ester (Kötz), 1907, A., i, 707.

β-hydroxy-, β-lactone of, from acetone and malonic acid, and its salts (Meldrum), 1908, T., 598; P., 31.

**Propylmalonylbenzidine** (Remfry), 1911, T., 622.

**Propylmalonylmalonamide** (Remfry), 1911, T., 619.

**Propylmeconines,** *n*- and *iso*- (Mermod and Simonis), 1906, A., i, 303.

**2-Propyl-$\Delta^{6:8(9)}$-menthadien-2-ol** (2-*propylcarveol*) and its optical constants (Klages), 1907, A., i, 598.

**2-Propylmenthatriene** and its optical constants (Klages), 1907, A., i, 598.

*d*-**1-*iso*Propyl-3-γ-methyl-amyl-** and **-$\Delta^{\alpha}$-pentenyl-benzenes** (Klages and Sautter), 1905, A., i, 579.

*cyclo***Propylmethylcarbinol** and its salts (Michiels), 1912, A., i, 259.

*cyclo***Propylmethylethylcarbinol** and chloride, bromide, and iodide of (Bruylants), 1909, A., i, 228.

**3-*iso*Propyl-9-methyl*dicyclo*nonane** (Rabe and Weilinger), 1904, A., i, 509.

*iso***Propyl methylvinyl ketone** and its *p*-nitrophenylhydrazone and semicarbazone, and isomeride (Blaise and Herman), 1908, A., i, 319.

**4′-*iso*Propyl-α-naphtha-flavonol** and its acetate and **-flavanone** (v. Kostanecki and Stenzel), 1907, A., i, 953.

*n*-**Propylnaphthalenes,** α- and β-, and their picrates (Bargellini and Melacini), 1908, A., i, 775.

*n*-**Propylnopinol** (Wallach), 1907, A., i, 1060.

**γ-Propyloctan-β-ol** (Guerbet), 1912, A., i, 527.

**γ-Propyloctan-β-one** (Guerbet), 1912, A., i, 527.

*iso***Propyl-*n*-octylcarbinol,** and rotation and derivatives of (Pickard and Kenyon), 1912, T., 629.

*iso***Propyl *n*-octyl ketone** (Pickard and Kenyon), 1912, T., 629.

**9-Propyloxanthranol,** β-bromo-, bromide of, and αβ-*di*bromo- (Kondo), 1911, A., i, 67.

**3-Propyl*iso*oxazoline** (Maire), 1908, A., i, 290.

**Propyloxy-.** See Propoxy-.

γ-*iso***Propylpentane**, β-iodo- (Clarke), 1908, A., i, 493.

*iso***Propyl***cyclo***pentane**, 3-amino- (Bouveault and Blanc), 1908, A., i, 135.

3-bromo- (Bouveault and Blanc), 1909, A., i, 108.

*iso***Propyl***cyclo***pentane-3-carboxylamide** (Bouveault and Blanc), 1908, A., i, 135.

**1-*iso*Propyl*cyclo*pentane-1-α-diol** (Meerwein and Unkel), 1910, A., i, 857.

**γ-*iso*Propyl-β-pentanol** (Clarke), 1908, A., i, 493.

*iso***Propyl***cyclo***pentan-3-ol** (Bouveault and Blanc), 1908, A., i, 135.

**γ-*iso*Propyl-β-pentanone** (*ethyl*iso*propylacetone*) (Clarke), 1908, A., i, 493.

*iso***Propyl***cyclo***pentan-2-one** and its semicarbazone (Kötz and Schüler), 1907, A., i, 59.

and its **carboxylic acid** and their semicarbazones (Bouveault and Locquin), 1908, A., i, 173.

*iso***Propyl***cyclo***pentan-3-one** (Bouveault and Blanc), 1908, A., i, 135.

and its semicarbazone (Wallach and Challenger), 1911, A., i, 472.

dibenzylidene derivative (Wallach and Challenger), 1912, A., i, 263.

**1-*iso*Propyl*cyclo*pentan-2-one-1-carboxylic acid**, methyl ester, and its semicarbazone, and ethyl ester (Kötz and Schüler), 1907, A., i, 58.

**1-*iso*Propyl*cyclo*pentan-2-one-3-carboxylic acid**, methyl ester, and its semicarbazone, and ethyl ester (Kötz and Schüler), 1907, A., i, 58.

ethyl ester (Bouveault and Locquin), 1908, A., i, 173.

**2-Propylperimidine** and its salts (Sachs), 1909, A., i, 428.

**2-*iso*Propylperimidine** and its hydrochloride and nitrate (Sachs and Steiner), 1909, A., i, 970.

**Propylphenetoles**, *o*-, *m*-, and *p*-, and the sulphonic acids of the *m*- and *p*-compounds (Klages), 1904, A., i, 1002.

*o*-**Propylphenol**, γ-chloro-, and its phenylcarbamate (v. Braun and Steindorff), 1905, A., i, 294.

*p*-**Propylphenol**, 2:6-*di*amino-, and its acetyl derivative, and 2:6-*di*nitro-, and their salts and derivatives (Thoms and Drauzburg), 1911, A., i, 716.

*tetra*bromo-, and its acetyl derivative (Hoering), 1904 A., i, 578.

*p*-**Propylphenol**, chlorobromo-derivatives of, and their acetyl compounds (Zincke and Hahn), 1904, A., i, 42.

*p*-*iso***Propylphenol**, constitution of the bromides of (Zincke), 1912, A., i, 443.

ψ-bromides and quinones of (Zincke and Grüters), 1906, A., i, 172.

bromo-derivatives and their acetyl compounds (Zincke), 1906, A., i, 737.

*p*-*iso***Propylphenylacrylic acid** and its salts (Bronstein), 1907, A., i, 848.

α-*p*-*iso***Propylphenyl α-bromopropyl ketone** (Kunckell), 1912, A., i, 432.

**α-*p*-*iso*Propylphenyl-$\Delta^{\alpha}$-butylene,** and its dibromide and α-chloro-β-bromo- (Kunckell), 1912, A., i, 432.

*p*- and *o*-*iso***Propylphenyl methoxymethyl ethers**, α-hydroxy- (Hoering and Baum), 1909, A., i, 571.

*p*-*iso***Propylphenylmethylcyanamide** (Sachs and Weigert), 1907, A., i, 1046.

**2-*p*-*iso*Propylphenyl-2:3-naphthaglyoxaline** and its additive salts, and 1-amino-, and its derivatives and compounds with aldehydes (Franzen and Scheuermann), 1908, A., i, 293.

β-*p*-*iso***Propylphenylpropionic acid**, β-hydroxy-, synthesis of, and its salts (Bronstein), 1907, A., i, 848.

*p*-*iso***Propylphenylpyruvic acid** and its sodium salt, and condensation with benzaldehyde (Erlenmeyer and Matter), 1905, A., i, 238.

*p*-**Propylphenyl-*o*-tolyliodinium** hydroxide and salts (Willgerodt and Sckerl), 1903, A., i, 747.

*n*-**Propylphosphine** (Partheil and Gronover), 1903, A., i, 801.

**Propylphthalamic acid**, β-bromo- (Bartholdy), 1907, A., i, 1044.

γ-bromo- (Gabriel), 1905, A., i, 649.

*iso***Propyl***iso***phthalic acid**, synthesis of (Bargellini), 1910, A., i, 744.

**Propylphthalimide**, β-bromo-, transformation of, into the β-hydroxy-compound (Bartholdy), 1907, A., i, 1043.

nitrosoamine from (Gabriel), 1905, A., i, 651.

γ-chloro- (Gabriel), 1905, A., i, 650.

γ-nitro- (Gabriel), 1905, A., i, 441.

**Propylphthaliminomalonamic acid**, γ-cyanoamino- (Sörensen, Höyrup, and Andersen), 1912, A., i, 15.

**Propylphthaliminomalonic acid**, γ-bromo-, ethyl ester (Sörensen), 1905, A., i, 749.

**Propylphthaliminomalonic acid,** γ-cyano-, ethyl ester, and its hydrolysis (SÖRENSEN), 1903, A., i, 834.
  γ-cyanoamino-, and its ethyl ester and amide (SÖRENSEN, HÖYRUP, and ANDERSEN), 1912, A., i, 14.
γ-*iso***Propylpimelic acid,** bromo-, ethyl and ethyl hydrogen esters (PERKIN and SIMONSEN), 1907, T., 1742; P., 198.
**1-Propylpiperidine,** γ-chloro-, and the formation of an octacyclic polymeride from (HÖRLEIN and KNEISEL), 1906, A., i, 458.
  and its quaternary salt, and γ-iodo-, and its salts (GABRIEL and COLMAN), 1906, A., i, 881.
  γ-hydroxy-, and its additive salts (GABRIEL and COLMAN), 1907, A., i, 237.
    and its compound with benzyl iodide (DUNLOP), 1912, T., 2002; P., 230.
**2-Propylpiperidine,** β-hydroxy-, and its salts (LÖFFLER and FRIEDRICH), 1909, A., i, 180; (LÖFFLER and TSCHUNKE), 1909, A., i, 325.
  γ-hydroxy-, and its hydrochloride and mercurichloride (LÖFFLER and FLÜGEL), 1909, A., i, 831.
*iso***Propyl***cyclo***propane,** 1-bromo- (BRUYLANTS), 1909, A., i, 228.
**2-*iso*Propyl*cyclo*propanecarboxylic acid** and its ethyl ester, amide, and anilide (BLANC), 1907, A., i, 763.
**Propylpropiolic acids.** See Hexinoic acids.
α-*iso***Propylpropionic acid,** *di*bromo-. See β-Methyl-α-bromomethylbutyric acid, bromo-.
α-*cyclo***Propylpropionic acid,** α-hydroxy- (KIJNER and KLAWIKORDOFF), 1911, A., i, 635.
**Propyl*iso*propylacetic acid.** See α-*iso*-Propylvaleric acid.
**Propyl*iso*propylcarbinol** and its acetate (MUSET), 1907, A., i, 374.
  rotation and derivatives of (PICKARD and KENYON), 1911, P., 324; 1912, T., 633.
β-*cyclo***Propyl-$\Delta^{\alpha}$-propylene** (HENRY), 1908, A., i, 881; (KIJNER and KLAWIKORDOFF), 1911, A., i, 635.
  and its tribromo-derivative (BRUYLANTS), 1908, A., i, 227.
**Propylpropylideneimine** and its compound with hydrogen cyanide (HENRY), 1904, A., i, 854.
*cyclo***Propyl propyl ketone** (MICHIELS), 1911, A., i, 63.
**Propyl*iso*propylmalonic acid,** monamide of (FISCHER, HOLZAPFEL, and V. GWINNER), 1912, A., i, 158.
**3-Propylpyrazoline** and its picrate and phenylcarbamide (MAIRE), 1908, A., i, 291.
**3-Propylpyrazolone** (BOUVEAULT and BONGERT), 1903, A., i, 143, 144.
**1-Propylpyridine,** β-bromo-, and its additive salts, and their transformation products (LÖFFLER and KIRSCHNER), 1905, A., i, 938.
**2-Propylpyridine,** β-amino-, and its additive salts (LÖFFLER and KIRSCHNER), 1905, A., i, 939.
  β-hydroxy-, and its additive salts (LÖFFLER), 1904, A., i, 266, 616.
    derivatives of (LÖFFLER and KIRSCHNER), 1905, A., i, 938.
**4-Propylpyridine,** ω-*tri*chloro-β-hydroxy-, and its platinichloride (DÜRING), 1905, A., i, 233.
2-*iso***Propylpyridine,** αγ-*di*hydroxy- (*dimethylol-2-picoline*), and its methochloride and their additive salts, and acyl derivatives (LIPP and RICHARD), 1904, A., i, 342.
  ω-hydroxy- and ω-iodo-, and their salts (LÖFFLER and GROSSE), 1907, A., i, 439.
**1-Propylpyridinium** salts (DECKER, KAUFMANN, SASSU, and WISLOKI), 1911, A., i, 1024.
**1-Propyl-2-pyridone** (DECKER, KAUFMANN, SASSU, and WISLOKI), 1911, A., i, 1024.
**1-Propylpyrrolidine** and its salts (V. BRAUN), 1911, A., i, 563.
**2-Propylpyrrolidine** and its salts and 1-benzenesulphonyl derivative (GABRIEL), 1909, A., i, 494.
**3-*n*-Propyl-4-quinazolone** (BOGERT and MAY), 1909, A., i, 329.
*iso***Propylquinol dimethyl ether** (KLAGES), 1904, A., i, 1004.
**4-Propylquinoline** and its additive salts (BLAISE and MAIRE), 1908, A., i, 567.
  synthesis of (BLAISE and MAIRE), 1907, A., i, 241.
*iso***Propylquinoline,** new, and its picrate (VAN HOVE), 1908, A., i, 827.
*iso***Propyl*iso*quinolinium** iodide (WEDEKIND and NEY), 1912, A., i, 501.
**2-Propylquinoxaline-3-carboxylic acid,** ethyl ester (WAHL), 1911, A., i, 109.
*iso***Propyl-4-stilbazole** and its dihydro-derivative and their salts (FREUND), 1906, A., i, 883.
*iso***Propylstilbene** and its dibromide (ERLENMEYER and KEHREN), 1904, A., i, 1016.

α-**Propylstyryl methyl ketone** and its semicarbazone (AUWERS), 1912, A., ii, 1014.

*p*-*iso***Propylstyryl nonyl ketone** (SCHOLTZ and MEYER), 1910, A., i, 562.

**Propylsuccinic acid**, anilide, anil, diamide, dihydrazide, and dibenzylidene derivative of (LOCQUIN), 1910, A., i, 10.

**Propylsuccinimide**, γ-bromo- (BARTHOLDY), 1907, A., i, 1044.

**Propyltanacetone** and its semicarbazone (HALLER), 1905, A., i, 602.

α-**Propyltetrahydroberberine** and ψ-α-**Propyltetrahydroberberine** and their salts (FREUND and MAYER), 1907, A., i, 633.

*N*-**Propyltetrahydropapaverine** and its picrate (PYMAN), 1909, T., 1747.

**1-Propyltetrahydroquinoline** and its salts and methiodide (V. BRAUN), 1909, A., i, 604.

**1-Propyltetrahydroquinoline**, γ-bromo-, hydrobromide and γ-iodo-, hydriodide (JONES and DUNLOP), 1912, T., 1752.

**2-Propyltetrahydro*iso*quinoline** (WEDEKIND and NEY), 1909, A., i, 514.

**2-Propyltetrahydro*iso*quinoline**, γ-iodo-, hydriodide (JONES and DUNLOP), 1912, T., 1753.

**2-*iso*Propyltetrahydro*iso*quinoline** (WEDEKIND and NEY), 1912, A., i, 501.

**2-Propyltetrahydro*iso*quinolinium-1-acetic acid iodide**, menthyl ester and an isomeric variety of (WEDEKIND and NEY), 1909, A., i, 514.

**2-*iso*Propyltetrahydro*iso*quinolinium-acetic acid** iodide, *l*-menthyl ester (WEDEKIND and NEY), 1912, A., i, 501.

**2-Propyltetrahydro*iso*quinolone**, 6:7-*di*hydroxy- (PYMAN), 1910, T., 275.

**Propyltheophylline**, chlorohydroxy- (CHEMISCHE WERKE VORM. H. BYK), 1910, A., i, 766.

**Propyltheophyllines**, *n*- and *iso*- (SCHMIDT and SCHWABE), 1906, A., i, 450.
  and their additive salts (SCHWABE), 1908, A., i, 45.

ψ-**Propylthiocarbamide** hydrobromide (WHEELER and BRISTOL), 1905, A., i, 482.

*p*-*iso*-**Propylthioltoluene** (AUWERS and ARNDT), 1909, A., i, 669.

**Propylthiopyrine** trioxide, chloro- (MICHAELIS, MOELLER, and KOBER), 1904, A., i, 781.

*iso***Propyl-ψ-thiopyrine** and its sulphone and methiodide (MICHAELIS, BESSON, MOELLER, and KOBER), 1904, A., i, 783.

*p*-*iso***Propyltoluene.** See *p*-Methyl*iso*propylbenzene.

**Propyltolyl methyl ethers** and hydroxy-, and their phenylurethanes (KLAGES), 1904, A. i, 1002.

*iso***Propyltrimethyl*cyclo*pentane.** See Trimethyl*iso*propyl*cyclo*pentane.

**5-Propyltrioloxazoline**, 2-thiol- (ROUX), 1903, A., i, 463.

*p*-**Propyltriphenylacetic acid** (BISTRZYCKI and MAURON), 1907, A., i, 1045.

*p*-**Propyltriphenylcarbinol** (BISTRZYCKI and MAURON), 1907, A., i, 1045.

**Propylurethane** and its nitroso-derivative (NIRDLINGER, ACREE, and HEAPS), 1910, A., i, 342.

α-**Propylvaleraldehyde** and its oxime and semicarbazone (SOMMELET), 1907, A., i, 108.

α-**Propylvaleramide** (*dipropylacetamide*), α-bromo- (KALLE & CO.), 1905, A., i, 639.
  cyano- (CONRAD and ZART), 1905, A., i, 754.

α-*iso***Propylvaleramide** (FISCHER, HOLZAPFEL, and V. GWINNER), 1912, A., i, 158.

α-**Propylvaleric acid** (*dipropylacetic acid*), α-cyano-, ethyl ester (CONRAD), 1905, A., i, 752.

α-*iso***Propylvaleric acid** (FISCHER, HOLZAPFEL, and V. GWINNER), 1912, A., i, 158.

α-*iso***Propylvaleric acid**, α-cyano-, ethyl ester, and the *dl*-acid and its metallic salts, and the brucine salt of the *d*-acid (FISCHER and FLATAU), 1909, A., i, 628.

β-*iso***Propylvaleric acid**, δ-bromo-, ethyl ester (BLANC), 1908, A., i, 245.

β-*iso***Propylvalerolactone** and its hydrazino-derivative (BLANC), 1908, A., i, 245.

α-**Propylvaleronitrile**, α-hydroxy- (ULTÉE), 1909, A., i, 294.

α-**Propylvaleryl chloride**, α-bromo- (KALLE & CO.), 1905, A., i, 639.

α-**Propylvalerylcarbamide**, α-cyano- (MERCK), 1905, A., i, 178; (CONRAD and ZART), 1905, A., i, 754.

β-**Propylvalerylcarbamide** (GEBRÜDER VON NIESSEN), 1903, A., i, 798.

α-*iso***Propylvinylbenzene.** See β-Phenyl-$\Delta^{\alpha}$-amylene.

**Propyl vinyl ketone** (BLAISE and MAIRE), 1906, A., i, 142.

**Prosapogenin** and its semicarbazone (ROSENTHALER and STRÖM), 1912, A., i, 640.

**Prosecretin** in relation to *diabetes mellitus* (BAINBRIDGE), 1908, A., ii, 213.

**Prostate**, calculi from the (Puaux), 1903, A., ii, 444.
**Prostate gland**, new pathogenic bacillus isolated from an enlarged (Dudgeon), 1906, A., ii, 693.
**Protagon** (Posner and Gies), 1905, A., i, 252; 1906, A., i, 54; (Barbieri), 1905, A., i, 621; (Cramer and Wilson), 1908, A., i, 234; (Rosenheim and Tebb), 1908, A., i, 488.
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**Protamine**, composition, derivation, and synthesis of (Taylor), 1909, A., i, 344.
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  from salmon spermatozoa, composition of the (Nelson), 1908, A., i, 1030.
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**2-Styryl-5-methylbenziminazole** and its derivatives (Fichter and Preiswerk), 1907, A., i, 84.
**4-Styryl-6-methyldihydro-2-pyrimidone** and its sodium salt, and hydrochloride, nitrate, and sulphate, and *p*-hydroxy-derivative (Stark), 1909, A., i, 261.
**2-Styryl-3-methyl-4-dihydroquinazolone** methiodide (Bogert and Geiger), 1912, A., i, 511.
**Styryl methyl diketone** (*benzylidenediacetyl*) and its hydrazone derivatives (Diels and Anderson), 1911, A., i, 464.
**Styryl methylenedioxystyryl ketone** (*benzylidenepiperonylideneacetone*) hydrochloride (Francesconi and Cusmano), 1908, A., i, 803.
**Styryl methyl ketone** (*benzylideneacetone*) and its hydrochlorides (Francesconi and Cusmano), 1908, A., i, 803.
  catalytic reduction of (Vavon), 1912, A., i, 628.
  aminopyrrolidone derivatives from (Kohn), 1908, A., i, 829.
  *di*bromide, action of alcoholic potash on (Ruhemann and Watson), 1904, T., 1180; P., 176.
  nitrate (Reddelien), 1912, A., i, 986.
  ψ-nitrosite and nitro-oxime of (Wieland), 1904, A., i, 55.
  oxide (Prileschaeff), 1912, A., i, 635.
**Styryl methyl ketone**, *p*-amino-, and its oxime, hydrazone, acyl, and thiocarbamide derivatives (Rupe and Siebel), 1906, A., i, 858.
  bromo-, and its phenylhydrazone (Ruhemann and Watson), 1904, T., 464.
  4-bromo-2-nitro-, and 4-chloro-2-nitro- (Lachs and Sichel), 1904, A., i, 594.
**Styryl methyl ketone**, *o*-hydroxy-, hydrochlorides (Francesconi and Cusmano), 1908, A., i, 803.
  *p*-hydroxy-, and its acetate (Zincke and Mühlhausen), 1903, A., i, 265.
**Styryl methyl ketone-phenylhydrazone**, *p*-nitro- (Auwers and Voss), 1910, i, 71.
**Styryl methyl ketone-semicarbazone** and *o*-hydroxy-, behaviour of, towards aniline (Borsche and Merkwitz), 1904, A., i, 946.
  oximino- (Rupe and Kessler), 1910, A., i, 94.
**2-Styryl-5-methylpyrazine** and *o*-hydroxy- and *p*-nitro- (Franke), 1906, A., i, 47.
**2-Styryl-3-methyl-4-quinazolone,** and 7-amino- (Bogert, Bell, and Amend), 1911, A., i, 162, 163.
**2-Styryl-4-methylquinoline** and its salts (Spallino and Cucchiaroni), 1912, A., i, 582.
**2-Styryl-6-methylquinoline** (6-*methyl*-2-*irazole*) and *p*-hydroxy-*m*-nitro-, and hexahydro-derivatives and their additive salts (Gasda), 1906, A., i, 41.
**2-Styryl-6-methylquinoline**, *m*- and *p*-amino- and *m*- and *p*-nitro- (Porai-Koschitz, Solodowinkoff, and Troitzki), 1907, A., i, 974.
**2-Styryl-8-methylquinoline,** and *o*-, *m*-, and *p*-nitro-, and their additive salts (Hoffmann), 1906, A., i, 40.
**Styryl-α- and -β-naphthathiazoles** and their amino-, chloro-, hydroxy-, and nitro-derivatives and their acetyl compounds (Rupe and Schwarz), 1905, A., i, 83.
**Styryl α-naphthyl ketone**, *p*-nitro- (Scholtz and Meyer), 1910, A., i, 562.
**α- and γ-Styryl nonyl ketone**, derivatives of (Scholtz and Meyer), 1910, A., i, 562.
**Styryl *n*-nonyl ketone-phenylhydrazone** (Auwers and Voss), 1910, A., i, 71.
**Styryl*iso*oxazolone** (Riedel and Schulz), 1909, A., i, 583.
**Styryl oximinomethyl ketone** (*benzylidene*iso*nitrosoacetone*), and its oxime, and *m*-nitro-, and its oxime, phenylhydrazone and semicarbazone (Harries and Mills), 1904, A., i, 428.
**Styryl-*m*- and -*p*-oxyacetic acids**, ω-nitro-, ethyl esters (Remfry), 1911, T., 286; P., 21.
**Styrylparaconic acid** and its dibromide (Bougault), 1906, A., i, 670.

**Styryl phenylazomethyl ketone,** *p*-nitro- (Prager), 1903, A., i, 540.
**Styryl β-phenylethyl ketone** (*benzylbenzylideneacetone*) and its oxime and phenylhydrazone (Harries and Gollnitz), 1904, A., i, 427.
**Styrylpiperidylcarbamide** (Forster), 1909, T., 439.
**1-Styryl*cyclo*propane-2-carboxylic acid** and its amide, dibromide, and ethyl ester (v. der Heide), 1904, A., i, 583.
**β-Styrylpropionic acid,** β-amino-, and its silver salt, hydrochloride, and benzoyl derivative and its methyl ester (Posner and Rohde), 1909, A., i, 649.
**γ-Styrylpropyl alcohol,** ααγ-*tri*hydroxylamino- (*β-hydroxylamino β-cinnamenylpropionhydroxamoxime hydroxide*) (Posner and Rohde), 1909, A., i, 649.
  α-oximino-γ-hydroxylamino- (*β-hydroxylamino-β-cinnamenylpropionylhydroxamic acid*) and its hydroxylamine salt and tetrabenzoyl derivative (Riedel and Schulz), 1909, A., i, 583.
**Styryl *iso*propyl ketone** (Auwers and Voss), 1910, A., i, 71.
  reactions of, and its dibromide (Dieckmann and Kron), 1908, A., i, 389.
**Styrylpyrazolecarboxylic acid,** hydrazide of (Ruhemann), 1909, T., 117.
**2-Styrylpyrimidine** (Sachs and Steiner), 1909, A., i, 970.
**4-Styrylpyrimidine** and its dibromide (Gabriel and Colman), 1904, A., i, 103.
**2-Styryl-4-quinazolone** and 3-amino-, 7-acetylamino-, 3:7-diacetylamino-, and *o*-hydroxy-, and their derivatives (Bogert, Bell, and Amend), 1911, A., i, 162.
**2-Styrylquinoline** (*benzylidenequinaldine : 2-irazole*), derivatives of (Gasda), 1906, A., i, 41.
  and its *p*-amino-, nitro-, and dihydroxy-derivatives, and the diacetyl compound of the dihydroxy-derivative, and their dyeing properties (Noelting and Witte), 1906, A., i, 886.
**2-Styrylquinoline,** bromo-, and -*o*-nitro- and its salts (Loew), 1903, A., i, 577.
  5-, 6-, and 8-nitro-, and their additive salts (Schmidt), 1906, A., i, 39.
**4-Styrylquinoline,** bromo-, and *o*- and *p*-nitro- and their salts (Loew), 1903, A., i, 578.
**Styryl β-styrylvinyl ketone-phenylhydrazone** (Bauer and Dieterle), 1911, A., i, 922.
**Suberane.** See *cyclo*Heptane.
**Suberene** (Markownikoff), 1903, A., i, 239.
**Suberic acid,** synthesis of, by means of organo-magnesium compounds (Zelinsky and Gutt), 1907, A., i, 676.
  electrolytic decomposition of (Vanzetti), 1907, A., i, 823.
  dry distillation of (Aschan), 1912, A., i, 536.
  dialdehyde of, and its dioxime, formation of (Le Sueur), 1907, T., 1366 ; P., 196.
  ethyl hydrogen ester and its chloride and *p*-toluidide (Blaise and Kœhler), 1910, A., i, 298.
  dimenthyl ester, and dibrucine salt, and their rotatory powers (Hilditch), 1909, T., 1579 ; P., 214.
**Suberic acid,** αζ-*di*amino-, synthesis of, and its salts, hydrochloride, and phenylcarbimide derivatives (Neuberg and Neimann), 1905, A., i, 687.
**Suberol.** See Suberyl alcohol.
**Suberone.** See *cyclo*Heptanone.
**Suberonitrile.** See Hexane, *di*cyano-.
**Suberyl alcohol** (Demjanoff), 1904, A., i, 411.
  preparation of (Markownikoff), 1903, A., i, 239.
**Suberyl *tert.*-glycol** and **bromide,** preparation of (Markownikoff), 1903, A., i, 239.
**Subhalogen salts,** old and new (Wöhler and Rodewald), 1909, A., ii, 141.
**Sublamin** and mercuric chloride, comparative experiments on the properties of (Scordo), 1907, A., ii, 713.
**Sublimation** by the dynamical method (Scheffer), 1910, A., ii, 484.
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  vacuum, practical studies in (Kempf), 1908, A., ii, 929.
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**Sublimation curves** (Bouzat), 1903, A., ii, 588.
**Submaxillary glands,** gaseous metabolism of (Barcroft and Piper), 1912, A., ii, 782.

**Submaxillary glands,** oxygen tension in (Barcroft), 1906, A., ii, 178.
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**Substance** (m.p. 95°) from benzylphenoxyacetone and benzaldehyde (Stoermer and Wehln), 1903, A., i, 41.
(m.p. 101–102°), from di-*o*-acetylhydrazobenzene (Camps), 1903, A., i, 33.
new, from the skins of olives (Peano), 1903, A., ii, 173
$CH_3ON_7$ and its copper salt from aminoguanidine diazohydroxide and sodium hydroxide (Hofmann, Hock, and Roth), 1910, A., i, 447.
$C_2H_4N_4$, from azoimide and methylcarbylamine (Oliveri-Mandalà), 1910, A., i, 343.
$C_2H_2OS$, from acetylene and sulphur dioxide (Losanitsch), 1908, A., ii, 33.
$C_2H_3ON_7$, from triazomethylcarbimide and water (Forster and Müller), 1910, T., 1064.
$C_2H_3O_3N_3,\frac{1}{2}H_2O$, from oxidation of glyoxime, and its ammonium salt (Ulpian and de Dominicis), 1912, A., i, 341.
$C_2H_4O_3N_2$, from nitroacetimide chloride (Steinkopf and Bohrmann), 1908, A., i, 328.
$C_2H_2O_5S_2Na_2Hg$, from hydroxymercuryacetic aldehyde and sodium thiosulphate (Schoeller and Schrauth), 1910, A., i, 460.
$C_3H_2S_6$, from carbon disulphide and hydrogen or hydrogen sulphide (Losanitsch), 1908, A., ii, 32.
$C_3H_3O_3N_3$, from α-methazonic anhydride and water (Steinkopf, Bohrmann, Grünupp, Kirchhoff, Jürgens, and Benedek), 1910, A., i, 308.
$C_3H_3O_3N_3$, from nitromalonic aldoxime nitrile (Hill and Hale), 1903, A., i, 402.
$C_3H_4O_4N_2$, and its isomeride, from the hydrolysis of isonitrosomalonamide (Ratz), 1904, A., i, 299.
$C_3H_5O_2N$, from ethanolamine and cyanic acid (Knorr and Rössler), 1903, A., i, 465.
$C_3H_5O_3N_3$, from oximinomalonamideamidoxime and sodium nitrite (Wieland and Baumann), 1912, A., i, 838.
**Substance,** $C_3H_5NS_2$, from ethanolamine and carbon disulphide (Knorr and Rössler), 1903, A., i, 465.
$C_3H_5N_5S_2$, from diguanide and carbon disulphide (Rackmann), 1910, A., i, 897.
$C_3H_6OS$, from methyl chlorothiocarbonate and magnesium methyl iodide (Delépine), 1910, A., i, 612.
$C_3H_5S_2Br_6Al$, from aluminium bromide, ethyl bromide, bromine, and carbon disulphide (Plotnikoff), 1903, A., i, 137.
$C_4HCl_5$, from αααγδδ-hexachloro-Δβ-butylene and quinoline (Nicodemus), 1911, A., i, 346.
$C_4H_4Br_2$, from tetrabromobutane (Willstätter and Bruce), 1907, A., i, 1019.
$C_4H_5Br$, from the action of lead oxide and water on 1:1-dibromocyclobutane (Kijner), 1907, A., i, 936.
$C_4H_6O_3$, from the action of dilute sulphuric acid on *ap*-dimethylaminoanil of ethyl αβ-diketobutyrate (Sachs, Wolff, and Kraft), 1903, A., i, 793.
$C_6H_6O_4$, and its dihydrazone and methyl derivative, from the condensation of ethyl oxalate and dimethylketol (Diels and Stern), 1907, A., i, 467.
$(C_4H_6N_2)_n$, from the action of hydrogen cyanide on aminoacetone hydrochloride (Gabriel), 1905, A., i, 265.
$C_4H_{10}O_2$, from the action of light on acetone and ethyl alcohol (Ciamician and Silber), 1911, A., i, 514.
$C_4O_{11}Ti_2$, from hydrogen peroxide, titanium hydroxide, and oxalic acid (Mazzucchelli and Pantanelli), 1909, A., i, 631.
$C_4H_2O_2Br_2$, and $C_5H_4O_4Br_2$, from the action of bromine on bromoisopyromucic acid (Chavanne), 1905, A., i, 77.
$C_4H_5O_3N_3$, and $C_8H_9O_2N_5$, from isonitrosomethylpyrazolone (Betti), 1904, A., i, 533.
$C_4H_5O_7N_3,{}^3/_4H_2O$, from the hydrolysis of nitroacetamide (Ratz), 1904, A., i, 858.
$C_4H_6O_2N_2$, from histidine (Fränkel), 1906, A., i, 547.
$C_4H_6O_2N_4$, from ethyl bromosuccinate and hydrazine hydrate, and its derivatives (Curtius and Gockel), 1911, A., i, 402.

**Substance**, $C_4H_6O_4N_2$, from the hydrolysis of the methyl derivative of isonitrosomalonamide (Ratz), 1904, A., i, 300.

$C_4H_6O_4S_2$, from sulphur monochloride and silver acetate (Denham), 1909, T., 1238.

$C_4H_8O_2N_6$, and $C_4H_{10}O_3N_6$, from the oxidation of uric acid (Denicke), 1906, A., i, 939.

$C_4H_8O_3Cl_2$, from dichloromethyl oxide and trioxymethylene (Descudé), 1906, A., i, 559.

$C_4H_9O_2N_7$, from triazomethylcarbimide and ammonia (Forster and Müller), 1910, T., 1066.

$C_4H_{13}O_9N_2$, from ethyl mesoxalate and hydrazine hydrate (Curtiss, Koch, and Bartells), 1909, A., i, 213.

$C_4H_2O_2Cl_4Hg_3$, from mercury chloroacetylide, mercuric chloride and sodium acetate (Hofmann and Kirmreuther), 1910, A., i, 17.

$C_4H_6N_2Br_4Si$, from acetonitrile and silicon tetrabromide (Reynolds), 1909, T., 513.

$C_4O_4S_4K_4Ni$, from potassium dithiooxalate and nickel salts (Jones and Tasker), 1909, P., 160.

$C_4H_{10}N_7S_4ICr$, formula of (Pfeiffer and Tilgner), 1908, A., i, 614.

$(C_5H_8O)_n$, from ethylene and carbon monoxide (Losanitsch), 1908, A., i, 33.

$C_5H_{10}O_3$, from isovaleraldehyde and ozone (Harries and Koetschau), 1910, A., i, 607.

$C_5O_2S_6$, from carbon disulphide and carbon monoxide (Losanitsch), 1908, A., ii, 32.

$C_5H_2O_7N_4$, from *aci*dinitroethyl alcohol (Duden and Ponndorf), 1905, A., i, 558.

$C_5H_7O_3N$, from *d*-glutamic acid (Abderhalden and Kautzsch), 1910, A., i, 769.

$C_5H_9ON_3$ and $C_5H_9N_4$, from porphyrexide (Piloty and Vogel), 1903, A., i, 524.

$C_5H_9OCl$, from isoprene and hypochlorous acid (Heux), 1912, A., i, 599.

$C_5H_{10}ON_4$, from porphyrexide (Piloty and Vogel), 1903, A., i, 524.

$C_5H_{10}O_4N_6$, from triazomethylcarbimide and water (Forster and Müller), 1910, T., 1063.

$C_5H_{10}O_5N_4$, from oxidation of 3- and 7-methyluric acids (Grohmann), 1911, A., i, 691.

**Substance**, $C_5H_{12}O_3N_6$, from oxidation of 3- and 7-methyluric acids (Grohmann), 1911, A., i, 691.

$C_5H_9O_2NS_2$, from ammonium dithiocarbamate and ethyl chloroacetate (Delépine), 1903, A., i, 236.

$C_5H_{10}O_2NCl$ (or $C_5H_{12}O_2NCl$), from the oxidation of nitrosopiperidine in acetone solution (Vorländer and Wallis), 1906, A., i, 765.

$C_5H_{11}O_2NSe$, from selenious anhydride, piperidine, and benzene (Marino and Squintani), 1912, A., i, 127.

$C_5H_{12}O_5N_2S_2$, from rongalite, ammonium chloride, and formaldehyde (Binz and Isaac), 1908, A., i, 940.

$C_6H_2Cl_{12}$, from action of silent electric discharge on chloroform (Losanitsch), 1910, A., i, 1.

$C_6H_8O$ (two), and their oximes, from the condensation of acetaldehyde (Zeisel and v. Bittó), 1908, A., i, 761.

$C_6H_8O$, from tetrolacetal and potassium hydroxide, and its derivatives (Viguier), 1912, A., i, 161.

$C_6H_8O_2$ (?), from the action of potassium hydroxide on α-cyanosorbic acid (Haerdtl), 1906, A., i, 62.

$(C_6H_8O_2)_n$, from the absorption of oxygen by the condensation product of acetylene (Losanitsch), 1908, A., i, 846.

$C_6H_{10}O$, from the decomposition of *N*-dimethylbistrimethylenedi-imine dimethochloride (Knorr and Roth), 1906, A., i, 457.

$C_6H_{11}O_2$, from magnesium ethyl bromide and ethyl mesoxalate (Lemaire), 1909, A., i, 200.

$C_6H_{12}S$, from αζ-di-iodohexane and potassium sulphide (v. Braun), 1911, A., i, 75.

$C_6H_7O_2N$, and its *p*-nitrophenylhydrazone, and $C_6H_8O_2N_2$, and its benzoyl and phenylcarbimide derivatives, from hexane-βγε-trioneoxime (Angelico and Calvello), 1904, A., i, 447.

$C_6H_7O_4N$, from β-*p*-methoxyphenylpropaldehyde (Balbiano), 1908, A., i, 901.

$C_6H_7O_5N_3,H_2O$, from glycine and alloxan (Piloty and Finckh), 1904, A., i, 823.

$C_6H_8ON_4$, from 1-amino-1:3:4-triazole and diacetyl (Bülow and Weber), 1909, A., i, 614.

$C_6H_9O_2N$, from the action of nitric acid on $C_{30}H_{54}$ (Jovitschitsch), 1908, A., i, 118.

**Substance**, $C_6H_9O_3N_3$, from chloroacetyldiglycinimide and ammonia (Bergell and Feigl), 1908, A., i, 140.

$(C_6H_{10}ON)_x$, from acetone and phenylhydroxylamine (Scheiber and Wolf), 1907, A., i, 1028.

$C_6H_{10}O_4N_2$, and $C_6H_{12}O_4N_4$, from amyl nitrite and ethyl β-aminocrotonate (H. and A. v. Euler), 1904, A., i, 146.

$C_6H_{10}N_2S$, from α-acetylaminothioisobutyramide (Hellsing), 1904, A., i, 563.

$C_6H_{10}ON_6$, from 7-hydroxy-5-methyl-1:2:4:9-benzotetrazole and hydrazine (Bülow and Haas), 1910, A., i, 596.

$C_6H_{10}O_4S_2$, from sulphur monochloride and silver propionate (Denham), 1909, T., 1238.

$C_6H_{11}O_2N_4$, from nitrosodiacetonesemicarbazide (Rupe and Kessler), 1910, A., i, 16.

$C_6H_{11}O_3Fe$, from an ethyl-alcoholic solution of ferrous acetate (Hofmann and Bugge), 1907, A., i, 888.

$C_6H_{13}O_3N$, from the reduction of *d*-glucosamic acid (Neuberg and Wolff), 1903, A., i, 74.

$C_6H_{13}O_3N$, from the action of nitrous acid on lysine (Szydlowski), 1907, A., i, 18.

$C_6H_{13}O_6N$, from chitosoxime and silver nitrite (Neuberg and Neimann), 1903, A., i, 74.

$C_6H_{16}O_{14}N_6$, from glyoxylic acid and guanidine (Kaess and Gruszkiewicz), 1903, A., i, 7.

$C_6H_3O_2NCl_2$, from *s*-dimethylpyrrole and sulphuryl chloride, and its derivatives (Colacicchi), 1911, A., i, 225.

$C_6H_5O_5N_2Na_3$, from tetraketopiperazine and sodium ethoxide (de Moulpied and Rule), 1909, T., 551.

$C_6H_7ON_2Cl_3$, from 4-methylglyoxaline and chloral (Gerngross), 1909, A., i, 189.

$C_6H_8O_4N_2Cl_2,2H_2O$, from the decomposition of 3:6-dioxyquinonebistriazen (Henle), 1907, A., i, 162.

$C_6H_4O_4N_3NaHg$, from 4-imino-2:6-diketodihydropyrimidine-3-acetic acid and mercuric oxide (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 804.

$C_7H_4S_6$, from carbon disulphide and acetylene (Losanitsch), 1908, A., ii, 32.

**Substance**, $C_7H_7O$, from phenylacetaldehyde (Rassow and Burmeister), 1912, A., i, 32.

$C_7H_8O_7,2H_2O$, from the condensation of citric acid and formaldehyde in presence of picric acid (Orloff), 1907, A., i, 382.

$C_7H_{10}O_3$, from magnesium ethyl bromide and ethyl mesoxalate, and its semicarbazone (Lemaire), 1909, A., i, 200.

$C_7H_{13}N$, from the action of ammonia on hexahydrobenzaldehyde (Wallach and Isaac), 1906, A., i, 564.

$C_7H_{14}O_2$, from the action of sulphuric acid on hydroxymethylethylallylcarbinol (Wagner, Lwoff, and Bening), 1904, A., i, 643.

$C_7H_{14}O_3$, and its oxime and diacetyl derivative, from acetaldehyde and formylisobutyraldol (Weis), 1905, A., i, 17; (Schachner), 1905, A., i, 171.

$C_7H_{14}O_3$, from heptaldehyde, ozone and ethyl chloride (Harries and Koetschau), 1910, A., i, 607.

$C_7H_2O_2Br_4$, and its aniline and bromine compounds, from pentabromotolu-ψ-quinol (Zincke and Böttcher), 1906, A., i, 167.

$C_7H_2O_4Br_3$, from methronic acid and bromine (Trefilieff and Mangubi), 1909, A., i, 821.

$C_7H_2O_4Br_4$, from methronic acid and bromine (Trefilieff and Mangubi), 1909, A., i, 821.

$C_7H_4OS_2$, from the diazotisation of *o*-aminophenol (Friedländer and Mauthner), 1905, A., i, 103.

$C_7H_5O_2N$, from the action of light on *o*-nitrobenzyl alcohol (Sachs and Hilpert), 1904, A., i, 876.

$C_7H_6OS_3$, from α-thienyl methyl ketone, carbon disulphide and potassium hydroxide, and its derivatives (Kelber and Schwarz), 1911, A., i, 740.

$C_7H_6O_2N$, from chloroamino-*p*-toluquinol (Zincke, Schneider, and Emmerich), 1903, A., i, 760.

$C_7H_6O_4N_2$, from condensation of nitromethane and 5-nitrosalicylaldehyde (Remfry), 1911, T., 287.

$C_7H_6O_4Cl_2$, and $C_7H_7O_4Cl_3$, from β-amino-orcinol (Henrich, Meyer, and Dorschky), 1904, A., i, 494.

$C_7H_6O_5N_4$, from 4-methyl-1-ethyluracil and sulphuric and nitric acids (Bückendorff), 1912, A., i, 54.

**Substance**, $C_7H_6O_6N_3$, from the nitration of diacetyl-*p*-aminophenol (Reverdin and Bucky), 1906, A., i, 749.
$C_7H_7O_2N$, from *o*-nitrotoluene (Kalle & Co.), 1908, A., i, 980.
$C_7H_7O_2Cl$, from-$\alpha\gamma$-dimethylglutaconic acid and phosphorus pentachloride (Feist and Reuter), 1910, A., i, 10.
$C_7H_7O_3Br$, from dibromo-2:6-dimethyl-4-pyrone (Feist and Baum), 1905, A., i, 915.
$C_7H_7O_4N$, from benzaldehyde and nitric acid (Shukoff and Kasatkin), 1909, A., i, 398.
$(C_7H_7NS_2)_x$, from the oxidation of 2-amino-4:5-dithioltoluene (Fichter, Fröhlich, and Jalon), 1907, A., i, 1031.
$C_7H_8O_4N_4$, from hydantoin and formaldehyde (Behrend and Niemeyer), 1909, A., i, 258.
$C_7H_9O_4N$, from the action of hydroxylamine on ethyl mono- and di-acetylmalonates (Palazzo and Salvo: Palazzo and Carapelle), 1905, A., i, 858.
$C_7H_9O_4N$, and its silver salt, and ethyl ester, from hydroxylamine and ethyl dimethylpyronedicarboxylate (Palazzo), 1904, A., i, 762.
$C_7H_{10}O_3N_2$, from hydrazine hydrate and ethyl dimethylpyronedicarboxylate (Palazzo and Liverani), 1911, A., i, 921.
$C_7H_{11}O_2N$, from the action of nitric acid on $C_{30}H_{54}$ (Jovitschitsch), 1908, A., i, 118.
$C_7H_{12}ON_2$, and its semicarbazone, from acetonylacetone and potassium cyanide (Zelinsky and Schlesinger), 1907, A., i, 721.
$C_7H_{12}O_4N_2$, from the oxidation of 1:2-dimethyl-$\Delta^1$-cyclopentene (Kijner), 1908, A., i, 865.
$C_7H_{13}O_2N$, from ethanolamine and acetylacetone (Knorr and Rössler), 1903, A., i, 465.
$C_7H_{13}O_2N$, from ethyl acetoacetate and methylcarbamide (Kiessling), 1906, A., i, 946.
$C_7H_{13}O_3N$, from ethylamine and an amide from ethyl $\alpha$-cyanoglutaconate (Guthzeit and Eyssen), 1909, A., i, 674.
$C_7H_{13}O_4N$, from $\alpha$-aminoglutaric acid, aurichloride of (Engeland), 1910, A., i, 843.
$C_7H_{15}O_2N$, from ethyl iodomethylpiperidiniumacetate (v. Braun), 1908, A., i, 608.

**Substance**, $C_7H_{17}O_2N_3$, from dimethylaminomethyl alcohol and nitromethane (Henry), 1905, A., i, 609.
$C_7H_4O_6N_2Br_4$, from the action of sodium carbonate on tetrabromo-*o*-methylquinnitrole nitrate (Zincke and Klostermann), 1907, A., i, 323.
$C_7H_5O_{24}N_9Cu_4$, from copper nitrate and benzonitrile (Guntz and Martin), 1910, A., ii, 498.
$C_7H_{11}ONS_2$, from the distillation of $C_9H_{17}O_2NS_2$ (v. Braun), 1903, A., i, 15.
$C_7H_4O_5SNa_2Hg$, from hydroxymercurybenzoic anhydride and sodium sulphite (Schoeller and Schrauth), 1910, A., i, 460.
$C_8H_6O_3,3H_2O$, from pannarol (Hesse), 1903, A., i, 705.
$C_8H_{12}O_2$, from condensation of crotonaldehyde (Smedley), 1911, T., 1631.
$C_8H_{12}O_2$, from action of sulphuric acid on paracetaldehyde, and its semicarbazone and oxime (Delépine), 1909, A., i, 85.
$C_8H_{14}O$, and its oxime, from the action of sulphuric acid on butane-$\alpha\gamma$-diol (Bauer), 1904, A., i, 279.
$C_8H_{14}O$, from $\gamma$-coniceine and nitrous acid (v. Braun and Steindorff), 1905, A., i, 813.
$C_8H_{14}O_2$, from condensation of crotonaldehyde (Smedley), 1911, T., 1632.
$C_8H_{14}O_3$, from the methylation of dihydroxydimethyleneacetone (Willstätter and Pummerer), 1905, A., i, 457.
$C_8H_{14}S_2$, from acetylene and hydrogen sulphide (Losanitsch), 1908, A., ii, 33.
$C_8H_{16}O_2$, from the action of sulphuric acid on dihydroxymethylpropylallylcarbinol (Wagner, Lwoff, and Bening), 1904, A., i, 643.
$C_8H_{16}O_3$, from octaldehyde and ozone (Harries and Koetschau), 1910, A., i, 607.
$C_8H_{17}N$, from reduction of $\eta$-chloro-octylamine, and its salts (Gabriel), 1910, A., i, 229.
$C_8H_4O_4N_2$, from the action of nitrous fumes on cinnamaldehyde (Wieland), 1903, A., i, 768.
$C_8H_6ON_2$ (two), from 3-hydroxy-1:2-dihydroquinoxaline (Motylewski), 1908, A., i, 370.

**Substance**, $C_8H_6O_2N_2$, from benzoylchlorocarbamide and alkali (Diels and Wagner), 1912, A., i, 512; (Diels and Okada), 1912, A., i, 918.

$C_8H_7O_2N$, from *p*-aminobenzoic acid and formaldehyde (H. and A. v. Euler), 1905, A., ii, 343.

$C_8H_7O_4N_3$, from the ethyl ester of the acid, $C_4H_4O_3N_2$ (Frerichs and Hartwig), 1906, A., i, 164.

$C_8H_7O_5N$, from 6-nitroresorcinol and formaldehyde (Borsche and Berkhout), 1904, A., i, 416.

$C_8H_8O_2N_2$, from ethyl oxalylbishydrazoneacetoacetate (Bülow and Lobeck), 1907, A., i, 301.

$C_8H_8O_3N_2$, and its potassium derivative, from the action of ethyl hydroxyethylacetoacetate and ammonia on ethyl cyanoacetate (Guareschi), 1905, A., i, 823.

$C_8H_9ON$, from formaldehyde and formanilide (Orloff), 1905, A., i, 189.

$C_8H_9O_2N_3$, from aniline and nitroacetonitrile (Steinkopf, Bohrmann, Grünupp, Kirchhoff, Jürgens, and Benedek), 1910, A., i, 307.

$C_8H_9O_2N_3$, from *N*-hydroxydioxindole and hydrazine sulphate (Heller and Sölling), 1909, A., i, 184.

$C_8H_{10}O_2N_2$, from the action of nitrous acid on aminodimethyldihydroresorcin (Haas), 1907, T., 1444; P., 192.

$C_8H_{10}O_2N_2$, from phenyltriazomethylcarbamide and sodium carbonate (Forster and Müller), 1910, T., 1065.

$C_8H_{10}O_3N_4$, from 4:5-diamino-2:6-diketo-1:3-dimethylpyrimidine (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 79.

$C_8H_{10}O_5N_4$, from hydantoin and formaldehyde (Behrend and Niemeyer), 1909, A., i, 258.

$C_8H_{11}ON$, from ethyl 1-methylcyclohexan-3-one-4-carboxylate and aminocyclohexane (Kötz and Merkel), 1909, A., i, 157.

$C_8H_{11}ON_3$, and its platinichloride, from the reduction of 4-oximino-3-imino-1:1-dimethyl-5-cyclohexanone and of the oxime of isonitrosodimethyldihydroresorcin (Haas), 1907, T., 1447, 1448.

$C_8H_{14}ON_2$, from ethylamine and an amide derived from ethyl α-cyanoglutaconate (Guthzeit and Eyssen), 1909, A., i, 674.

**Substance**, $C_8H_{14}O_2N_2$, from acetonecyanohydrin and hydrogen chloride (Ultée), 1910, A., i, 15.

$C_8H_{15}O_3N$, from ethanolamine and ethyl acetoacetate (Knorr and Rössler), 1903, A., i, 465.

$C_8H_{15}NS_2$, from isoamylamine, ethylene dibromide, and carbon disulphide (v. Braun), 1903, A., i, 15.

$C_8H_{18}O_2N_6$, from mesityl oxide and semicarbazide (Rupe and Schlochoff), 1904, A., i, 144.

$C_8H_5ONS$, from indoxyl and sodium tetrasulphide (Gesellschaft für Chemische Industrie in Basel), 1909, A., i, 735.

$C_8H_5ON_4K$, from *p*-triazobenzaldehyde and potassium cyanide (Forster and Judd), 1910, T., 260.

$C_8H_5O_6N_2Br$, from the action of nitric acid, in acetic acid solution, on tetrabromodi-*p*-hydroxydi-α-phenylethane (Zincke and Henke), 1909, A., i, 24.

$C_8H_{12}O_4NBr$, from the action of potassium hydroxide on $C_8H_{13}O_4NBr_2$ (Demjanoff), 1903, A., i, 394.

$C_8H_{13}O_4NBr_2$, from the action of hydrogen bromide on nitroisobutyl glycol (Demjanoff), 1903, A., i, 394.

$C_8H_6O_3N_2Cl_3Br$, from chloral and *p*-bromo-*o*-nitroaniline (Wheeler and Jordan), 1909, A., i, 673.

$C_8H_{10}O_2Cl_6I_2S_2$, from 1:4-dimethylthiolbenzene tetraiodide and chlorine (Zincke and Frohneberg), 1909, A., i, 644.

$C_8H_{10}O_2Cl_2S_2Hg$, from phenylene 1:4-dimethyldisulphoxide and mercuric chloride (Zincke and Frohneberg), 1909, A., i, 643.

$C_8H_{10}O_2Br_2S_2Hg$, from 1:4-dimethylthiolbenzene tetrabromide and mercuric chloride (Zincke and Frohneberg), 1909, A., i, 643.

$(C_9H_5N_2)_x$, from the decomposition of the silver salt of phenylmalononitrile (Hessler), 1908, A., i, 182.

$C_9H_6O_3$ (two), from isopyromucic acid (Chavanne), 1905, A., i, 77.

$(C_9H_8O_2)_x$, from benzaldehyde and ethyl tetrolate (Feist), 1906, A., i, 332.

$C_9H_8O_3$, from acetylene and carbon monoxide (Losanitsch), 1908, A., ii, 33.

$C_9H_8S$, from acetophenone, formaldehyde and alkali sulphides (Compagnie Morana), 1906, A., i, 24.

**Substance**, $C_9H_8S_{10}$, from carbon disulphide and ethylene (Losanitsch), 1908, A., ii, 32.

$C_9H_{10}O$, from methylephedrine and methyl-ψ-ephedrine methyl hydroxides (Schmidt and Emde), 1906, A., i, 978.

$C_9H_{10}O_2$, from the action of ethylene dibromide on the disodium derivative of diacetylacetone (Bain), 1907, T., 548 ; P., 77.

$C_9H_{10}O_3$, from nonaldehyde and ozone (Harries and Koetschau), 1910, A., i, 607.

$C_9H_{11}O_2$, from quinol and acetone (Schmidlin and Lang), 1910, A., i, 837.

$C_9H_{12}O_2$, from the action of ethyl iodide on the disodium derivative of diacetylacetone (Bain), 1906, T., 1228 ; P., 196.

$C_9H_{12}O_2$, and its methyl ether, from the condensation of ethyl acetoacetate and formaldehyde in sodium hydroxide (Orloff), 1907, A., i, 380.

$C_9H_{12}O_3$, from catechol and acetone (Schmidlin and Lang), 1910, A., i, 837.

$C_9H_{12}O_5$, from ethyl sodiomalonate and acetyl chloride in ether (Benary), 1907, A., i, 381.

$C_9H_{12}O_7$, from the interaction of ethyl malonate, sodium ethoxide and iodine (Komnenos), 1910, A., i, 542.

$C_9H_{14}O$, from oxidation of terecamphene (Aschan), 1912, A., i, 367.

$C_9H_{14}O_2$, from the reduction of acraldehyde (van Romburgh and van Dorssen), 1906, A., i, 141.

$C_9H_{15}O$, polymeride of, from the action of the silent electric discharge on moist methane (Löb), 1908, A., i, 117.

$C_9H_{16}O_2$, from oxidation of camphene (Henderson and Sutherland), 1911, T., 1548 ; P., 212.

$C_9H_{16}O_3$, from oxidation of 1:3-dimethyl-5-methylene-$\Delta^3$-cyclohexene (Auwers and Peters), 1910, A., i, 826.

$C_9H_{18}O$, from the acid, $C_{10}H_{18}O_3$ (Semmler and McKenzie), 1906, A., i, 374.

$C_9H_{18}O_2$, from di-isobutyryl and magnesium methyl iodide (Bouveault and Locquin), 1906, A., i, 803.

$C_9H_{18}O_2$, from the action of sulphuric acid on dihydroxymethyl-*n*-butylallylcarbinol (Wagner, Lwoff, and Bening), 1904, A., i, 643.

**Substance**, $(C_9H_5ON)_x$, from methyl ω-bromoacetophenone-*o*-carboxylate (Gabriel), 1907, A., i, 1042.

$C_9H_6O_2N_2$, from isatin and hydrogen cyanide (Heller and Nötzel), 1908, A., i, 267.

$C_9H_6O_3Cl_2$, from β-chloro-α-hydroxy-3:4-methylenedioxyphenylethane and phosphorus pentachloride (Böttcher), 1909, A., i, 153.

$C_9H_7O_2N$, from the oxidation of β-phenylalanine (Posner), 1904, A., i, 160.

$C_9H_8ON_2$, from dicyanodiamide and benzoic anhydride (Pohl), 1908, A., i, 576.

$C_9H_8ON_2$, from 5-hydroxy-1-phenyl-4-methyl-5-triazole (Dimroth and Letsche), 1905, A., i, 100.

$C_9H_8OS_2$, from acetophenone and carbon disulphide, and its derivatives (Kelber), 1910, A., i, 391 ; (Kelber and Schwarz), 1911, A., i, 741.

$C_9H_8O_5N_2$, from 1-chloro-2:4-dinitrobenzene and sodioacetone (Reitzenstein and Stamm), 1910, A., ii, 358.

$C_9H_9O_2N_3$, from cinnamoylhydrazide hydrochloride, and sodium nitrite (Muckermann), 1911, A., i, 682.

$C_9H_{11}O_2N$, from coal-tar (Schultz and Székely), 1910, A., i, 725.

$C_9H_{11}O_2N_3$, from *o*-toluidine and nitroacetonitrile (Steinkopf, Bohrmann, Grünupp, Kirchhoff, Jürgens, and Benedek), 1910, A., i, 307.

$C_9H_{11}O_4N$, and its salts and diacetate, from the action of nitrous acid on *o*-hydroxymesityl alcohol (Fries and Kann), 1907, A., i, 614.

$C_9H_{12}OCl_2$, and its isomeride, from magnesium methyl iodide and 1-keto-2-methyl-2-dichloro-methyl-1:2-dihydrobenzene (Auwers), 1906, A., i, 947.

$C_9H_{12}O_2N_2$, from ethyl 1-methylcyclohexan-3-one-4-carboxylate and carbamide (Kötz and Merkel), 1909, A., i, 158.

$C_9H_{13}O_6N$, from potassium cyanide and ω-bromoacetophenone-*o*-carboxylic acid (Gabriel), 1907, A., i. 1042.

$C_9H_{15}ON$, from 4-acetyl-1-methylcyclohexan-3-one and ammonia (Léser), 1912, A., i, 778.

$C_9H_{15}OCl$, from sabina ketone and hydrogen chloride (Wallach and Heyer), 1908, A., i, 425.

**Substance,** $C_9H_{15}O_2N_3$, from extract of mushroom, and its aurichloride (Kutscher), 1911, A., ii, 528.

$C_9H_{17}O_2N$, from aminoethyl ether and acetylacetone (Knorr and Meyer), 1905, A., i, 748.

$C_9H_{17}O_4N$, from α-aminoglutaric acid, aurichloride of (Engeland), 1910, A., i, 843.

$C_9H_{19}O_6P$, from α-hydroxy-ββ-dimethylbutyric acid and phosphorus pentachloride (Richard), 1911, A., i, 8.

$C_9H_{23}O_{10}N_9$, from glyoxylic acid and guanidine (Kaess and Gruszkiewicz), 1903, A., i, 7.

$C_9H_9O_3N_2Cl_3$, from chloral and *o*-nitro-*p*-toluidine (Wheeler and Jordan), 1909, A., i, 673.

$C_9H_{11}O_5N_2Na_3$, from tetraketopiperazine and sodium amyloxide (de Moulpied and Rule), 1909, T., 550.

$C_9H_{17}O_2NS_2$, from ethylamine, ethyl α-bromoisobutyrate, and carbon disulphide (v. Braun), 1903, A., i, 15.

$C_{10}H_6O_3$, from indandione and ethyl orthoformate (Errera), 1903, A., i, 266.

$C_{10}H_8O_4$, and its reactions, from the condensation of triacetic lactone with ethyl acetoacetate (Fleischmann), 1907, T., 251; P., 16.

$C_{10}H_8N_4$, from piperidine hydrochloride and sodium nitrohydroxylaminate (Angeli and Castellana), 1905, A., i, 491.

$C_{10}H_{10}O_3$, and its oxime and semicarbazone, from the glycol from isosafrole (Balbiano, Paolini, and Luzzi), 1904, A., i, 73.

$C_{10}H_{10}O_4$, from 3:4-dihydroxycinnamic acid and methyl alcohol (Posner), 1911, A., i, 53.

$C_{10}H_{10}O_5$, and its phenylhydrazone and semicarbazone, from βγδ-triketopentane and piperidine (Sachs and Wolff), 1903, A., i, 793.

$C_{10}H_{12}O_2$, from porinic acid (Hesse), 1903, A., i, 706.

$C_{10}H_{12}O_2$, from the action of propylene dibromide on the disodium derivative of diacetylacetone (Bain), 1907, T., 550.

$C_{10}H_{12}O_2$, from the Pacific arbor vitæ (Blasdale), 1907, A., i, 631.

$C_{10}H_{12}O_4$, from cyclohexyl iodide and ethyl sodioacetoacetate, and its dibromo-derivative (Hell and Schaal), 1909, A., i, 593.

**Substance,** $(C_{10}H_{12}O)$, from the reduction of 4:7-dimethylcoumarin (Fries and Fickewirth), 1908, A., i, 824.

$C_{10}H_{14}O$, from β-terpineol (Wallach and Schmitz), 1906, A., i, 372.

$C_{10}H_{14}O_2$, from the condensation of acetaldehyde (Zeisel and v. Bittó), 1908, A., i, 761.

$C_{10}H_{14}O_2$, from π-norcamphor (Semmler and Bartelt), 1907, A., i, 1062.

$C_{10}H_{14}O_2$, from the action of propyl iodide on the disodium derivative of diacetylacetone (Bain), 1906, T., 1234; P., 196.

$C_{10}H_{14}O_3$, and its diacetyl derivative, from the reduction of formylisobutaldol (Böhm), 1907, A., i, 16.

$C_{10}H_{14}O_5$, from acetylacetone and βγδ-triketopentane (Sachs and Wolff), 1903, A., i, 792.

$C_{10}H_{14}S_4$, from acetylene and hydrogen sulphide (Losanitsch), 1908, A., ii, 33.

$C_{10}H_{15}Cl$, from the action of hypochlorous acid on camphene (Sławiński), 1906, A., i, 29.

$C_{10}H_{16}O$, from the hydrolysis of camphene chlorohydrin (Sławiński), 1906, A., i, 29.

$C_{10}H_{16}O$, from the Californian laurel (Tutin), 1908, T., 257; P., 24.

$C_{10}H_{16}O$, from cotton-seed oil (Matthes and Heintz), 1909, A., i, 573.

$C_{10}H_{16}O$, from polymeride of crotonaldehyde (Delépine), 1910, A., i, 219.

$C_{10}H_{16}O$, from the seeds of *Monodora grandiflora* (Leimbach), 1910, A., i, 186.

$C_{10}H_{16}O$, from *d*-pinene (Denaro and Scarlata), 1903, A., i, 844.

$C_{10}H_{16}O_2$, from the oxidation of camphene (Wagner, Moycho, and Zienkowski), 1904, A., i, 438.

$C_{10}H_{16}O_2$, from ethylene and carbon monoxide (Losanitsch), 1908, A., ii, 33.

$C_{10}H_{16}O_2$, from action of sulphuric acid on oxidation product of caryophyllene (Deussen), 1909, A., i, 172.

$C_{10}H_{18}O_2$, from oxidation of caryophyllene (Deussen), 1909, A., i, 171.

$C_{10}H_{18}O_3$, from the hydrolysis of the potassium salt of santanol (Hildebrandt), 1903, A., ii, 166.

**Substance,** $C_{10}H_{18}O_4$, from isobutaldehyde and glyoxal (Rosinger), 1907, A., i, 824.

$C_{10}H_{18}Cl_2$, from isothujene (Kondakoff and Skworzoff), 1910, A., i, 755.

$C_{10}H_{20}O$, from methylisopropylpinacone (Beaume), 1903, A., i, 727.

$C_{10}H_{20}O$, from the action of dilute sulphuric acid on propionepinacone (Kohn), 1905, A., i, 167.

$C_{10}H_{20}O_3$, from isobutaldehyde and glyoxal (Rosinger), 1907, A., i, 824.

$C_{10}H_{20}O_3$, from the reduction of formylisobutaldol (Böhm), 1907, A., i, 16.

$C_{10}H_{22}O_3$, from the reduction of the substance, $C_{10}H_{20}O_3$ (Rosinger), 1907, A., i, 825.

$C_{10}H_4O_3Cl_4$, from the action of thionyl chloride on isosafrole dibromide (Barger and Ewins), 1908, T., 2090.

$C_{10}H_6N_2Se$, from 1:8-naphthylenediamine and selenious acid (Sachs), 1909, A., i, 432.

$C_{10}H_7O_5N$, from *o*-methylcarbonatobenzoyl chloride and glycine (Fischer), 1909, A., i, 162.

$C_{10}H_8O_3N_4$, from α-methazonic anhydride (Steinkopf, Bohrmann, Grünupp, Kirchhoff, Jürgens, and Benedek), 1910, A., i, 308.

$C_{10}H_9O_2I$, from the action of Wys's solution on β-naphthol (Wake and Ingle), 1908, A., i, 416.

$C_{10}H_{10}OS_2$, from *p*-tolyl methyl ketone, carbon disulphide and potassium hydroxide, and its derivatives (Kelber and Schwarz), 1911, A., i, 740.

$C_{10}H_{10}O_3S$, from benzophenoneoxime and phosphorus pentasulphide (Ciusa), 1904, A., i, 425.

$C_{10}H_{10}O_4N_2$, from oxamethane and 3:4-methylenedioxylbenzylamine (Mannich and Kuphal), 1912, A., i, 851.

$C_{10}H_{11}ON$, from anilinoisobutyric acid (Bucherer and Grolée), 1906, A., i, 349.

$C_{10}H_{11}O_3N_3$, from methyl 1-phenyl-5-triazolone-4-carboxylate and alcoholic hydrogen sulphide (Dimroth, Aickelin, Brahn, Fester, and Merckle), 1910, A., i, 519.

$C_{10}H_{11}O_5N$, from the action of hydrochloric acid on ethyl ammonium 6-hydroxy-2-methylpyridine-3:5-dicarboxylate (Simonsen), 1908, T., 1029.

**Substance,** $C_{10}H_{12}ON_2$, from *p*-aminophenol and acetonecyanohydrin (Bucherer and Grolée), 1906, A., i, 349.

$C_{10}H_{12}O_2N_2$, from 4-keto-2-benzyl-4:5-dihydroglyoxaline and water (Finger and Zeh), 1910, A., i, 591.

$C_{10}H_{12}O_2N_2$, from oxamethane and benzylmethylamine (Mannich and Kuphal), 1912, A., i, 851.

$C_{10}H_{13}OBr$, from the acid, $C_{10}H_{15}O_2Br$, from pinene (Henderson and Heilbron), 1908, T., 291; P., 31.

$C_{10}H_{13}O_2N_3$, from *m*-xylidine and nitroacetonitrile (Steinkopf, Bohrmann, Grünupp, Kirchhoff, Jürgens, and Benedek), 1910, A., i, 307.

$C_{10}H_{14}OCl_2$, and its isomeride, from the action of magnesium ethyl iodide on 1-methyl-1-dichloromethyl-$\Delta^{3:5}$-cyclohexadien-2-one (Auwers), 1906, A., i, 947.

$C_{10}H_{14}O_2N_2$, from condensation of methyl ethyl ketonecyanohydrin and sodiocyanoacetic ester (Inglis), 1911, T., 544; P., 46.

$C_{10}H_{14}O_4N_2$, and $C_{10}H_{14}O_5N_2$, from the nitrosate of 1-nitrocamphene (Forster and Micklethwait), 1904, T., 327; P., 19.

$C_{10}H_{14}O_6N_2$, from the condensation of ethyl sodio-*N*-carbethoxyglycine (Leuchs and Geserick), 1909, A., i, 107.

$C_{10}H_{15}OCl$, from pinene (Henderson and Heilbron), 1908, T., 294; P., 31.

$C_{10}H_{15}OBr_5$, from triallylcarbinol hexabromide (Reformatsky), 1909, A., i, 3.

$C_{10}H_{15}O_2N$, from bornylene and nitrous acid (Henderson and Heilbron), 1911, T., 1898; P., 249.

$C_{10}H_{15}O_2N_3$, from silver pernitrosocamphor (Angeli and Marchetti), 1908, A., ii, 842.

$C_{10}H_{15}O_5N$, from chitamic acid, acetic anhydride, and sodium acetate (Neuberg and Wolff), 1903, A., i, 74.

$C_{10}H_{15}O_6N_3$, from terpinene nitrosite and nitric acid (Amenomiya), 1905, A., i, 603.

$C_{10}H_{15}O_6N_7$, from glycoluril and formaldehyde, and its additive compounds with inorganic salts (Behrend, Meyer, and Rusche), 1905, A., i, 419.

**Substance**, $C_{10}H_{16}O_4N_2$, from acetyl chloride and α-bromoisohexoyl-*l*-asparagine (Fischer and Koenigs), 1907, A., i, 487.

$C_{10}H_{17}O_2N$, from bornylene and nitric acid (Henderson and Heilbron), 1911, T., 1900; P., 249.

$C_{10}H_{17}O_4N$, and its hydrochloride from cotarnine and vanillin (Renz and Hoffmann), 1904, A., i, 611.

$C_{10}H_{18}O_2N_3$, isomeride of α-limonene hydroxylamineoxime (Cusmano), 1910, A., i, 686.

$C_{10}H_{18}O_2N_4$, from chloralurethane (Diels and Gukassianz), 1911, A., i, 24.

$C_{10}H_{18}O_3S$, from the reduction of camphane-hydrate-sulphonic chloride (Borsche and Lange), 1906, A., i, 680.

$C_{10}H_{18}O_4N_2$, from methyl piperazinediacetate methiodide (Franchimont and Kramer), 1902, A., i, 391.

$C_{10}H_{19}ON$, from the reduction of α-anhydropulegonehydroxylamine (Semmler), 1904, A., i, 438.

$C_{10}H_{19}O_5P$, from camphor and phosphoric acid (Shukoff and Kasatkin), 1909, A., i, 397.

$C_{10}H_{19}O_6N_5$, and $C_{11}H_{18}O_4H_5$, from egg-albumin (Hugounenq and Galimard), 1906, A., i, 776.

$C_{10}H_{19}O_9N$, from the hydrolysis of copper chondroitin-sulphate(Fränkel), 1907, A., i, 369.

$C_{10}H_{21}ON$, and its thiocarbamide, from α-anhydropulegonehydroxylamine (Semmler), 1904, A., i, 602.

$C_{10}H_5O_5N_2Na_3$, from tetraketopiperazine and sodium phenoxide (de Moulpied and Rule), 1909, T., 551.

$C_{10}H_6O_2N_2Cl_2$, from 5:6-dichloroanthranilic diformalide ethyl ether and potassium cyanide (Villiger), 1909, A., i, 931.

$C_{10}H_8ON_2S$, from 1:8-naphthylenediamine and thionyl chloride (Sachs), 1909, A., i, 432.

$C_{10}H_{10}N_2Br_4Si$, from pyridine and silicon tetrabromide (Reynolds), 1909, T., 513.

$C_{10}H_{11}O_5N_2Br_3$, from the action of potassium hypobromite on the green oil from the nitrosate of 1-nitrocamphene (Forster and Micklethwait), 1904, T., 334; P., 19.

$C_{10}H_{14}O_4N_2S_3$, from the action of ethyl chloroacetate on hydrazine dithiocarbazate (Andreasch), 1908, A., i, 684.

**Substance**, $C_{10}H_{17}O_3N_3S$, from ethyl cyanoacetylacetate and ethyl-ψ-thiocarbamide hydrobromide (Wheeler), 1907, A., i, 973.

$C_{10}H_{20}O_2N_2Cl_2$, from isomeride of α-limonenehydroxylamineoxime (Cusmano), 1910, A., i, 686.

$C_{11}H_8O_4$, preparation of, and use of, for the identification of carbamide and primary amines (Fenton), 1903, T., 187.

$C_{11}H_8O_8$, from the decomposition of methyl malonate chloride (Leuchs), 1906, A., i, 796.

$C_{11}H_{10}O_3$, from West Indian satinwood (Auld and Pickles), 1912, T., 1054; P., 143.

$C_{11}H_{10}O_4$, from ω-bromomethylfurfuraldehyde and barium carbonate (Cooper and Nuttall), 1911, T., 1200; P., 135.

$C_{11}H_{12}O_3$, and its dibromide, from the oil of *Piper Volkensii* (Schmidt and Weilinger), 1906, A., i, 299.

$C_{11}H_{12}O_3$, from the action of dilute acids on calmatambetin (Pyman), 1907, T., 1232; P., 184.

$C_{11}H_{12}O_4$, from 3:4-dihydroxycinnamic acid and methyl alcohol (Posner), 1911, A., i, 53.

$C_{11}H_{14}O_4$, from acetophenone and ethyl chlorocarbonate (Haller and Bauer), 1911, A., i, 300.

$C_{11}H_{14}O_5$, from the condensation of maleic acid and ethyl acetoacetate in presence of acetic anhydride (Trefilieff), 1907, A., i, 1063.

$C_{11}H_{14}O_6$, from ethyl methylacetonedicarboxylate (Feist and Pomme), 1910, A., i, 9.

$C_{11}H_{16}O_4$, from acetylacetone and formaldehyde (Rabe and Elze), 1904, A., i, 749.

$C_{11}H_{18}O$, from αδ-di-iodopentane and potassium sulphide (v. Braun), 1911, A., i, 75.

$C_{11}H_{18}O_3$, from oxidation of caryophyllene (Haarmann), 1909, A., i, 401.

$C_{11}H_{20}O_2$, and $C_{12}H_{22}O_4$, from the oxidation of octaglycol isobutyrate (Lesch and Michel), 1905, A., i, 403.

$C_{11}H_{22}O_2$, from ethylnopinol (Wallach), 1907, A., i, 1059.

$C_{11}H_7O_5N_3$, from pyridine and 1:3-dichloro-4:6-dinitrobenzene, salts of (Zincke and Weisspfenning), 1910, A., i, 585.

$C_{11}H_8O_2N_2$, from quinoline, methyl sulphate and nitromethane (Kaufmann), 1912, A., i, 1017.

**Substance**, $C_{11}H_9O_2N$, from citrodianilidic acid (Bertram), 1905, A., i, 466.

$C_{11}H_{10}O_2N_2$, and its benzoyl derivative, from the trioxime of 3-nitrosophenylmethylpyrrole (Angelico), 1905, A., i, 660.

$C_{11}H_{10}O_3N_2$, from ethylenediamine and phthalonic acid (Manuelli and Maselli), 1906, A., i, 308.

$(C_{11}H_{10}O_4N)_x$, from reduction of 2-keto-8(5)-methoxy-6:7-methylenedioxy-1:2-dihydroquinoline (Salway), 1909, T., 1217.

$C_{11}H_{10}O_5N_4$, from dinitroaminophenylpyridinum chloride (Zincke and Weisspfenning), 1912, A., i, 302.

$C_{11}H_{11}O_2N_3$, from the trioxime of 3-nitrosophenylmethylpyrrole (Angelico), 1905, A., i, 660.

$C_{11}H_{11}O_5N$, from purpuraldehyde, ethyl oxalacetate, and ammonia (Simon and Conduché), 1907, A., i, 964.

$C_{11}H_{13}ON$, from heating dimethylglutaconic acid *trans*-semianilide (Thole and Thorpe), 1911, T., 2231.

$C_{11}H_{13}ON$, and an isomeride from hydrolysis of 3:3:5-trimethylindolenine-2-formonitrile (Plancher and Carrasco), 1909, A., i, 959.

$C_{11}H_{13}O_3N_3$, from 3-methylpyrazolene-1-carbamidine and ethyl acetoacetate (Schestakoff and Kazakoff), 1912, A., i, 1033.

$C_{11}H_{13}O_6N$, from oxidation of nitrosantalin dimethyl ether (Cain and Simonsen), 1912, T., 1074 ; P., 140.

$C_{11}H_{14}ON_2$, from *p*-anisidine and acetonecyanohydrin (Bucherer and Grolée), 1906, A., i, 350.

$C_{11}H_{13}O_3Br_3$, from the action of bromine on matico-ether (Fromm and van Emster), 1903, A., i, 188.

$C_{11}H_{14}O_4N_2$, from pilocarpoic acid (Pinner), 1905, A., i, 463.

$C_{11}H_{14}O_5N_2$, from substance $C_{13}H_{17}O_6N$ (from ethylamine and ethyl 6-ethoxycoumalin-3:5-dicarboxylate) and ammonia (Guthzeit and Eyssen), 1909, A., i, 675.

$C_{11}H_{14}O_8N_2$, from the action of formaldehyde on the ammonium derivative of ethyl nitromalonate (Ulpiani and Pannain), 1903, A., i, 863.

**Substance**, $C_{11}H_{15}ON_3$, from 1-methyl-4-dichloroisopropylbenzene (Auwers), 1905, A., i, 434.

$C_{11}H_{15}O_3N$, from diacetyl and benzylhydroxylamine (Scheiber and Wolf), 1907, A., i, 1029.

$C_{11}H_{16}O_2N_2$, from ethyl cyclohexan-2-one-1-carboxylate and piperazine (Kötz and Merkel), 1909, A., i, 158.

$C_{11}H_{16}O_3N_3$, from chloralurethane (Diels and Gukassianz), 1911, A., i, 24.

$C_{11}H_{16}O_4N_2$, from ethyl 4-hydroxy-4-methylcyclohexan-6-one-1:3-dicarboxylate and hydrazine (Rabe and Rahm), 1904, A., i, 748.

$C_{11}H_{17}O_2N$, from action of sodium hydrate on cyanocarone (Clarke and Lapworth), 1910, T., 15.

$C_{11}H_{18}ON_2$, and $C_{12}H_7O_3N_3$, from pinene (Leach), 1906, P., 137.

$C_{11}H_{18}O_{10}N_6,H_2O$, from glyoxal and carbamide (Behrend, Meyer, and Rusche), 1905, A., i, 419.

$C_{11}H_{19}O_2N$, and $C_{11}H_{19}O_3N$, from isonitroso- and nitro-camphor and magnesium methiodide (Forster), 1904, P., 207.

$C_{11}H_{19}O_2N$, from pinene nitrosochloride and sodium methoxide (Deussen and Philipp), 1909, A., i, 815.

$C_{11}H_{20}O_2N_2$ (two), from the hydrolysis of casein (Skraup), 1908, A., i, 931.

$C_{11}H_{21}O_{16}N_9$, from glyoxylic acid and guanidine (Kaess and Gruszkiewicz), 1903, A., i, 7.

$C_{11}H_{22}O_2N_2$, from 4-methylamino-1:2:2:4-tetramethyl-5-pyrrolidone and ethylene oxide (Kohn and Bum), 1910, A., i, 137.

$C_{11}H_{22}O_2N_6$, from phorone and semicarbazide (Rupe and Schlochoff), 1904, A., i, 144.

$C_{11}H_{11}ONS_2$, from ammonium phenyldithiocarbamate and ethyl α-bromoisobutyrate (v. Braun), 1903, A., i, 16.

$C_{11}H_{11}OBrS_2$ from dimethyl ether of $C_9H_8OS_2$ (Kelber), 1910, A., i, 391.

$C_{11}H_{11}O_5SBr$, and its methyl and ethyl esters, from benzylidenesulphobutyric acid (Kohler), 1904, A., i, 321.

$C_{11}H_{12}OBr_2S_2$ from dimethyl ether of $C_9H_8OS_2$ (Kelber), 1910, A., i 391.

$C_{11}H_{15}ONS_2$, from the action of amyl nitrite on camphoryldithiocarbamic acid (Forster and Jackson), 1907, T., 1885 ; P., 242.

**Substance,** $C_{11}H_{20}O_5N_2S$, from ethyl oxalacetate and ethyl-ψ-thiocarbamide hydrobromide (Wheeler), 1907, A., i, 973.

$C_{12}H_{14}$, from action of silent electric discharge on benzene and hydrogen (Losanitsch), 1910, A., i, 2.

$C_{12}H_8O$, from acenaphthenequinone, and its magnesium salts (Kalle & Co.), 1910, A., i, 752.

$C_{12}H_{10}O_2$, from acetophenone and ethyl tetrolate (Feist), 1906, A., i, 332.

$C_{12}H_{10}N_4$, from trinitrodiphenylamine (Kalle & Co.), 1904, A., i, 455.

$C_{12}H_{13}O_3$, from dihydroxylaminohydrocoumarin and acetone (Francesconi and Cusmano), 1909, A., i, 234.

$C_{12}H_{14}O_2$, from phenol and cyclohexanone (Schmidlin and Lang), 1910, A., i, 837.

$C_{12}H_{14}O_3$, from cyclohexane-1:4-dione and ethyl succinosuccinate (Stollé and Möring), 1904, A., i, 875.

$C_{12}H_{16}O_5$, and its benzoyl derivative, from apiole mercuriacetate (Balbiano, Paolini, and Mammola), 1904, A., i, 73; (Balbiano and Paolini), 1904, A., i, 261.

$C_{12}H_{18}O$, and $C_{13}H_{20}O$, and their dibromides, from the action of magnesium alkyl iodides on hydroxy methylenecamphor (Forster and Judd), 1905, T., 369; P., 116.

$C_{12}H_{18}O_4$, from resorcinol and acetone (Schmidlin and Lang), 1910, A., i, 387.

$C_{12}H_{19}O_7$ from βγδ-triketopentane and ethyl malonate (Sachs and Wolff), 1903, A., i, 792.

$C_{12}H_{20}O$, from the action of sulphuric acid on butane-αγ-diol (Bauer), 1904, A., i, 280.

$C_{12}H_{20}O_5$, from ethyl oxalate and ethyl bromodiethylacetate (Rassow and Bauer), 1908, A., i, 316.

$C_{12}H_{22}O$, from fossil dammar resin (Gottlieb), 1912, A., i, 39.

$C_{12}H_{22}O$, from lauryl chloride by the action of heat (Bistrzycki and Landtwing), 1910, A., i, 87.

$C_{12}H_{22}O_2$, from camphorquinone and magnesium methiodide (Forster), 1904, P., 207.

$C_{12}H_{22}O_2$, from polymeride of crotonaldehyde (Delépine), 1910, A., i, 219.

$C_{12}H_{24}O_2$, from the aldol $C_6H_{14}O_2$ (Munk), 1905, A., i, 559.

$C_{12}H_{24}O_2$, from hydrolysis of picrotin, picrotoxinin, or picrotoxin (Sielisch), 1912, A., i, 886.

**Substance,** $C_{12}H_{24}S_6$, from ethylene and hydrogen sulphide (Losanitsch), 1908, A., ii, 33.

$C_{12}H_8ON_2$, from 9-hydroxy-2-methylperimidine hydrochloride (Kehrmann and Engelke), 1909, A., i, 151.

$C_{12}H_8O_2S_2$, from the action of hydrogen peroxide on trithienyl (Lanfry), 1912, A., i, 1013.

$C_{12}H_8O_4S_2,2H_2O$, from oxidation of diphenylene *p*-disulphoxide (Hilditch), 1910, T., 2588.

$C_{12}H_9O_4N,H_2O$, and its nitro-derivative, from $C_{12}H_{10}O_3N_2$ (de Jong), 1904, A., i, 551.

$C_{12}H_9O_4N_3$, from 2-nitroresorcinol and diazobenzene chloride (Kauffmann and de Pay), 1906, A., i, 169.

$C_{12}H_9O_7N_3$, from betaine $C_{12}H_7O_6N_3$ and sodium hydroxide (Zincke), 1910, A., i, 556.

$C_{12}H_{10}O_3N_2$, and its acetyl derivative, from the phenylhydrazone of the αγ-lactone of γ-hydroxy-α-ketobutane-αγ-dicarboxylic acid (de Jong), 1904, A., i, 551.

$C_{12}H_{10}O_5N_2$, from the action of nitrous acid on ethyl 1-iminohydrindene-2-carboxylate (Mitchell and Thorpe), 1910, T., 2272.

$C_{12}H_{10}N_2Cl_2$, from hydrogen chloride and *p*-chloroazobenzene (Jacobson and Loeb), 1909, A., i, 682.

$C_{12}H_{11}ON$, from formaldehyde and formyl-β-naphthylamine (Orloff), 1905, A., i, 190.

$C_{12}H_{11}O_2N$, and its acetyl derivative, from β-naphthol, formaldehyde, and hydroxylamine (Betti), 1906, A., i, 653.

$C_{12}H_{11}O_2N_5$, from dimethylvioluric acid and *m*-phenylenediamine (Piloty and Finckh), 1904, A., i, 822.

$C_{12}H_{11}O_5N_3,H_2O$, from dimethylalloxan and aminoresorcinol (Piloty and Finckh), 1904, A., i, 822.

$C_{12}H_{11}O_6N_3$, from the action of ethyl chloroacetate on the potassium salt of 4-nitrophthalylhydrazide (Curtius and Hoesch), 1907, A., i, 1079.

$C_{12}H_{11}O_8Sb$, from pyrogallol and antimonic acid (Biginelli), 1909, A., i, 802.

$C_{12}H_{12}O_3N_2$, from methyl formylsuccinate, aniline, and phenylhydrazine (Wislicenus, Böklen, and Reuthe), 1909, A., i, 11.

**Substance**, $C_{12}H_{12}O_3N_2$, from the compound, $C_6H_6O_4$, and *o*-phenylenediamine (Diels and Stern), 1907, A., i, 467.

$C_{12}H_{13}ON_3$, and its benzoyl derivative, from benzeneazo-2:5-dimethylpyrrole (Castellana), 1905, A., i, 941.

$C_{12}H_{13}O_8N$, from ethyl tetrahydroxybenzenedicarboxylate (Leuchs and Theodorescu), 1910, A., i, 396.

$C_{12}H_{14}ON_2$, from phenol and phenylhydrazine (Ciusa and Bernardi), 1909, A., i, 675.

$C_{12}H_{14}O_7N_2$ from the aldehydic ester $C_{22}H_{21}O_{12}N$ (Leuchs and Theodorescu), 1910, A., i, 396.

$C_{12}H_{15}O_6Na$, $C_{14}H_{19}O_6Na$, and $C_{15}H_{21}O_6Na$, from dimethylpyrone and sodiomalonates (Vorländer and Weissheimer), 1905, A., i, 794.

$C_{12}H_{16}O_2N_2$, from the action of nitrous acid on the β-condensation product of *m*-4-xylidine and acetaldehyde (Jones and White), 1910, T., 642.

$C_{12}H_{17}OI$, from phenoxyhexylene (Dionneau), 1910, A., i, 354.

$C_{12}H_{17}O_3N_3$, and its reactions, from pinene nitrosochloride and potassium cyanate (Leach), 1906, P., 304; 1907, T., 10.

$C_{12}H_{18}O_2N_4$, from hexamethylenetetramine and resorcinol (Grishkewitsch-Trochimowsky), 1910, A., i, 108.

$C_{12}H_{19}O_5N$, condensation product from acetonecyanohydrin and hydrogen chloride (Ultée), 1910, A., i, 15.

$C_{12}H_{19}O_5N$, from substance $C_{13}H_{17}O_6N$ (from ethylamine and ethyl 6-ethoxycoumaline-3:5-dicarboxylate) and sodium hydroxide (Guthzeit and Eyssen), 1909, A., i, 674.

$C_{12}H_{20}O_2N_2$, from the hydrolysis of casein (Skraup), 1908, A., i, 931.

$C_{12}H_{21}O_2N$, from ethyl *n*-butinene-α-carboxylate and piperidine (Dupont), 1909, A., i, 546.

$C_{12}H_{21}O_2N_3$, from ethyl trimethylpyruvate and ammonia (Richard), 1911, A., i, 8.

$C_{12}H_{21}O_{13}N$, from the nitration of cellulose (Crane and Joyce), 1910, A., i, 364.

$C_{12}H_{22}O_4N_2$, from the oxidation of sparteine (Willstätter and Marx), 1905, A., i, 545.

$C_{12}H_{22}O_5N_4$, from proto-albumose (Levene), 1905, A., i, 252.

**Substance**, $C_{12}H_{32}O_{25}N_{12}$, from glyoxylic acid and guanidine (Kaess and Gruszkiewicz), 1903, A., i, 7.

$C_{12}H_5O_{10}N_5S$, from oxidation of tetranitrophenazothionium hydroxide (Barnett and Smiles), 1909, T., 1261.

$C_{12}H_6ON_2Cl_4$, from 4-(*p*)-chloroanilino-2:3:6-trichlorobenzenediazonium nitrate, alcohol, and potassium carbonate (Jacobson, Bartsch, Loeb, and Steinbrenck), 1909, A., i, 684.

$C_{12}H_7O_6N_3S,H_2O$, from oxidation of dinitroazothionium hydroxide (Barnett and Smiles), 1909, T., 1264.

$C_{12}H_8O_3N_3Br$, from α-*p*-bromoazoxybenzene and nitric acid (Angeli and Valori), 1912, A., i, 321.

$C_{12}H_8O_7N_2Na_2$, from oxidation of aniline-*p*-sulphonic acid (Reitzenstein), 1910, A., i, 703.

$C_{12}H_{10}ONCl_3,H_2O$, from 2-methylquinoline and chloral (Gerngross), 1909, A., i, 189.

$C_{12}H_{13}O_6N_3S_2$, from phenylindamine and sodium hydrogen sulphite (Weil, Dürrschnabel, and Landauer), 1911, A., i, 1006.

$C_{12}H_{18}ONBr,H_2O$, from trimethylamine, and β-bromopropiophenone, and its aurichloride and platinichloride (Schmidt and Goehring), 1909, A., i, 322.

$C_{12}H_{18}O_6NCl_3$, from anhydrochloralurethane and ethyl malonate (Diels and Seib), 1909, A., i, 886.

$C_{13}H_{10}O_3$, from the condensation of cyclobutane-1:3-dione in the presence of quinoline (Chick and Wilsmore), 1910, T., 1998; P., 217.

$C_{13}H_{10}S$, from benzophenone, formaldehyde, and alkali sulphides (Compagnie Morana), 1906, A., i, 24.

$C_{13}H_{12}O_2$, from the action of benzyl chloride on resorcinol (Bakunin and Alfano), 1907, A., i, 915.

$C_{13}H_{12}O_4$, from the oxypeucedanin by the action of sulphuric acid (Herzog and Krohn), 1910, A., i, 125.

$C_{13}H_{12}O_8$, from the decomposition of ethyl malonate chloride (Leuchs), 1906, A., i, 796.

$C_{13}H_{12}N_2$, from dehydracetic acid (Benary), 1910, A., i, 435.

$C_{13}H_{14}O_3$, from benzylpyruvic acid and acetone (Bougault), 1912, A., i,771.

$C_{13}H_{14}O_4$, from ethyl camphorylidenecyanoacetate and sulphuric acid (Forster and Withers), 1912, T., 1334.

**Substance**, $C_{13}H_{14}O_4$, from tetramethylphloroglucinolaldehyde and acetic anhydride (Herzig, Wenzel, and Rona), 1906, A., i, 94.

$C_{13}H_{14}O_5$, and its acetyl derivative and phenylurethane, from oxypeucedanin (Herzog and Krohn), 1910, A., i, 125.

$C_{13}H_{14}N_2$, and its additive salts, from aminoacetone and benzaldehyde (Alexander), 1905, A., i, 92.

$C_{13}H_{16}O_5$, from the oxidation of tetramethyldihydrobrazileinol (Engels, Perkin, and Robinson), 1908, T., 1146.

$C_{13}H_{16}O_6$, from the oxidation of tetramethyldihydrobrazileinol (Engels, Perkin, and Robinson), 1908, T., 1145.

$C_{13}H_{18}O_6$, from the methylation of methyl diketoapocamphorate (Komppa), 1904, A., i, 141.

$C_{13}H_{20}O_2$, from α-cyclogeraniol (Bouveault), 1910, A., i, 380.

$C_{13}H_{20}S$, from acetone, citral, and alkali sulphides (Compagnie Morana), 1906, A., i, 24.

$C_{13}H_9O_4N$, from nitrofluorenyl acetate (Schmidt and Bauer), 1906, A., i, 26.

$C_{13}H_{10}ON_3$, from nitroso-*m*-phenylenediamine (Bertels), 1904, A., i, 621.

$C_{13}H_{11}O_2N$, from xanthhydrol and hydroxylamine (Fosse), 1906, A., i, 975.

$C_{13}H_{11}O_4N$, from benzophenone and nitric acid (Shukoff and Kasatkin), 1909, A., i, 398.

$C_{13}H_{12}O_5N_3$, from βγδ-triketopentane and *p*-nitrobenzyl cyanide (Sachs and Wolff), 1903, A., i, 793.

$C_{13}H_{14}O_2N_4$, from 2:2-dimethylindole (Angeli and Marchetti), 1908, A., i, 207.

$C_{13}H_{15}O_2N$, and its bromo-derivative, from *p*-tolylhydroxylamine and ethyl acetoacetate (Scheiber and Wolf), 1907, A., i, 1029.

$C_{13}H_{15}O_2N_3$, from ethyl α-cyano-α-ketobutyrate phenylhydrazone (Wislicenus and Silberstein), 1910, A., i, 539.

$C_{13}H_{15}NS_2$, from bromoacetophenone, isobutylamine and carbon disulphide (v. Braun), 1903, A., i, 15.

$C_{13}H_{16}ON_2$, from *m*-cresol and phenylhydrazine (Ciusa and Bernardi), 1909, A., i, 675.

$C_{13}H_{16}O_3N_2$, from ethyl acetoacetate and phenylcarbamide (Kiessling), 1906, A., i, 946.

**Substance**, $C_{13}H_{17}O_6N, H_2O$, from ethyl camphorylidenecyanoacetate and hydrogen peroxide (Forster and Withers), 1912, T., 1336.

$C_{13}H_{18}O_4N_4$, from *p*-aminobenzoic acid (Bresler, Friedemann, and Mai), 1906, A., i, 322.

$C_{13}H_{19}ON$, α- and β-isomerides from ψ-cumidine and acetaldehyde (Jones and White), 1910, T., 643.

$C_{13}H_{19}O_2N$, from mesityl oxide and benzylhydroxylamine (Scheiber and Wolf), 1907, A., i, 1028.

$C_{13}H_{19}O_3N$, from ethyl α-cyanocinnamate and magnesium isopropyl bromide (Kohler and Reimer), 1905, A., i, 348.

$C_{13}H_{19}O_4Br$, from dibromoasarone (Thoms and Beckstroem), 1904, A., i, 409.

$C_{13}H_{20}O_2N_4$, from propaldoxime and *p*-toluenediazonium hydroxide (Bresler, Friedemann, and Mai), 1906, A., i, 322.

$C_{13}H_{21}ON$, from dimethylamine dimethylcamphoformolaminecarboxylate (Tingle and Hoffmann), 1905, A., i, 800.

$C_{13}H_{22}O_5N_2$, from aminopinenedicarboxylic acid and glycine (Godden), 1908, T., 1172.

$C_{13}H_{25}O_2N$, from the action of propylamine on ethyl vinyl ketone (Blaise and Maire), 1908, A., i, 399.

$C_{13}H_{25}O_2N_3$, from 1-hydroxymethylpiperidine and nitromethane (Henry), 1905, A., i, 609.

$C_{13}H_{26}O_2N_2$, from 4-ethylamino-2:2:3-trimethyl-1-ethyl-5-pyrrolidone and ethylene oxide (Kohn and Bum), 1910, A., i, 137.

$C_{13}H_{48}O_{12}N_8$, from 5-hydroxy-1:3-diethylhydantoylcarbamide and acetone (Biltz and Topp), 1911, A., i, 693.

$C_{13}H_8O_2NCl$, from phenol, *o*-nitrobenzaldehyde, and hydrochloric acid (Guyot and Haller), 1904, A., i, 530.

$C_{13}H_8O_7N_2S$, from 1-chloro-2:4-dinitrobenzene and *o*-thiolbenzoic acid (Mayer), 1910, A., i, 261.

$C_{13}H_{14}O_4NI$, from the action of iodine on dehydroacetic acid (Ortoleva and Vassallo), 1904, A., i, 645.

$C_{13}H_{16}O_6NNa$, from ethyl oxalacetate and ethyl sodiocyanoacetate (Schmitt), 1907, A., i, 113.

$C_{13}H_{18}O_2NHg$, from *p*-aminophenylmercuric chloride and β-ethoxyacraldehyde acetal (Reitzenstein and Bonitsch), 1912, A., i, 740.

**Substance**, $C_{13}H_{18}O_3NI_3$, from di-iodotyrosine, methyl iodide and potassium hydroxide (Wheeler and Johns), 1910, A., i, 114.

$C_{14}H_6O_6$, and its potassium salt and diacetyl derivative, from the oxidation of quinolcarboxylic acid (Juch), 1905, A., i, 701.

$C_{14}H_6O_{10}$, and its hexa-acetyl derivative, from the oxidation of ellagic or flavellagic acid (Perkin), 1906, P., 114.

$C_{14}H_8N_4$, from the action of hydrochloric acid on 1:5-disulphohydrazinoanthraquinone (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 905.

$C_{14}H_{10}O_7$, from xanthophanic acid ethers and sulphuric acid (Liebermann), 1906, A., i, 557.

$C_{14}H_{12}O$, from 9-methylfluorene alcohol (Daufresne), 1908, A., i, 165.

$C_{14}H_{12}O_2$, and its diacetyl derivative, from hydrogen bromide and dihydroxystilbene (Zincke and Fries), 1903, A., i, 178.

$C_{14}H_{12}O_3$, and its acetate and benzoate, from the condensation of resorcinol (Meyer and Marx), 1907, A., i, 413.

$C_{14}H_{12}O_3$, and its derivatives, from West Indian satinwood (Auld and Pickles), 1912, T., 1055 ; P., 143.

$C_{14}H_{12}O_5$, and its acetyl derivative, from Grindelia resin (Power and Tutin), 1908, A., ii, 526.

$C_{14}H_{12}O_6$, from extract of red clover flowers (Power and Salway), 1910, T., 243 ; P., 20.

$C_{14}H_{12}O_6$, from isogalloflavin trimethyl ether (Herzig, Erdös, and Ruzicka), 1910, A., i, 676.

$C_{14}H_{14}O_5$, from αγ-dimethylglutaconic acid and phosphorus pentachloride, and its anilide and methyl hydrogen ester (Feist and Reuter), 1910, A., i, 10.

$C_{14}H_{16}O_4$, and $C_{16}H_{10}O_3$, and their benzoyl derivatives, from guaiaconic acid (Richter), 1906, A., i, 443.

$C_{14}H_{16}N_6$, from the action of magnesium phenyl bromide on bistriazoethane (Forster, Fierz, and Joshua), 1908, T., 1072 ; P., 102.

$C_{14}H_{20}O$, from acetone and cyclopentadiene (Thiele and Balhorn), 1906, A., i, 639.

$C_{14}H_{20}O_2$, from di-isobutyryl and magnesium phenyl bromide (Bouveault and Locquin), 1906, A., i, 803.

**Substance**, $C_{14}H_{20}O_3$, from oxidation of caryophyllene (Haarmann), 1909, A., i, 400.

$C_{14}H_{22}O$, from ψ-euphorbone (Tschirch and Leuchtenberger), 1908, A., i, 196.

$C_{14}H_{22}O_2$, from ethyl diazoacetate and *d*-pinene (Loose), 1909, A., i, 463.

$C_{14}H_4O_2Cl_{14}$, and $C_{14}H_5O_2Cl_{11}$, from the action of chlorine on di-*p*-aminostilbene (Zincke and Fries), 1903, A., i, 180.

$C_{14}H_5O_2Cl_{13}$ (two), from the action of chlorine on tetrachlorodi-*p*-hydroxytolane tetrachloride (Zincke and Fries), 1903, A., i, 182.

$C_{14}H_6O_2Cl_{12}$, from the action of chlorine on tetrachlorodi-*p*-hydroxystilbene dichloride (Zincke and Fries), 1903, A., i, 180.

$C_{14}H_8O_2N_2$, from 4-hydrazino-1-hydroxyanthraquinone and aniline (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 904.

$C_{14}H_8O_5Cl_6$, from reduction of hemiether of hexachloroethoxy-*o*-quinocatechol, and its tetra-acetyl derivative (Jackson and Kelley), 1909, A., i, 495.

$C_{14}H_{10}ON_4$, from dihydrazinoanthraquinone hydrochloride (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 904.

$C_{14}H_{10}O_2N_2$, and $C_{14}H_9O_2N_9$, from 1-hydroxy-2-phenylindole and 3-isonitro-2-phenylindole (Angeli and Angelico), 1904, A., i, 526.

$C_{14}H_{10}O_2Br_2$, and $C_{15}H_{12}O_2Br_2$, from *m*-bromoanisole and benzoyl chloride (Diels and Bunzl), 1905, A., i, 432.

$C_{14}H_{10}O_3N_4$, from 1:8-naphthylenediamine and alloxan (Sachs, Mylo, Meyerheim, Brunetti, Damm, Möhrke, Schwabacher, Steiner, and Voss), 1909, A., i, 432.

$C_{14}H_{10}O_4S_2$, from sulphur monochloride and sodium benzoate (Denham), 1909, T., 1237.

$C_{14}H_{10}O_5N$, from 5-aminosalicylic acid and *o*-nitrobenzaldehyde (Puxeddu), 1909, A., i, 720.

$C_{14}H_{10}O_5N_2$, from 6-amino-*m*-hydroxybenzoic acid and *o*-nitrobenzaldehyde, and hydrochloride of, and two isomerides from the *m*- and *p*-aldehydes (Puxeddu), 1909, A., i, 720.

$C_{14}H_{11}ON$, from 3-nitroso-1-hydroxy-2-phenylindole (Angeli and Angelico), 1907, A., i, 153.

**Substance,** $C_{14}H_{11}ON_5$ (two), from 5-hydroxy-1-phenyltriazole and benzenediazonium chloride (DIMROTH and EBERHARDT), 1905, A., i, 100.

$C_{14}H_{11}O_4N$, from 6-amino-*m*-hydroxybenzoic acid and salicylaldehyde (PUXEDDU), 1909, A., i, 720.

$C_{14}H_{11}O_4N$, from 5-aminosalicylic acid and *p*-hydroxybenzaldehyde (PUXEDDU), 1909, A., i, 720.

$C_{14}H_{11}O_5N$, from 5-aminosalicylic acid and catechualdehyde (PUXEDDU), 1909, A., i, 721.

$C_{14}H_{12}ON_2$, and its benzoate and acetate and methyl derivative, from *as*-phenylbenzylhydrazine and carbamide (MILRATH), 1908, A., i, 581.

$C_{14}H_{12}ON_2$, from salicylideneaniline and potassium cyanide (ROHDE and SCHÄRTEL), 1910, A., i, 776.

$C_{14}H_{12}O_2N_2$, and its isomeride, from the phenylhydrazone of dehydracetic acid (STOLLÉ), 1905, A., i, 838.

$C_{14}H_{12}O_3N_2$, and its acetyl derivative, from 2-amino-5-ethoxyphenol (HENRICH and SCHIERENBERG), 1904, A., i, 1050.

$C_{14}H_{12}O_4N_2$, from *p*-orsellinic acid and benzenediazonium chloride (HENRICH and DORSCHKY), 1904, A., i, 502.

$C_{14}H_{13}ON$ (two), and their urethanes, from 6-hydroxy-3-methylbenzaldehyde and aniline (ANSELMINO), 1906, A., i, 13.

$C_{14}H_{13}O_2N_3$, from xanthhydrol and semicarbazide (FOSSE), 1906, A., i, 975.

$C_{14}H_{13}O_3N$, from β-dinitrodiphenylethane and sodium ethoxide (ANGELI, CASTELLANA, and FERRERO), 1909, A., i, 740.

$C_{14}H_{13}O_3N$, from the action of nitric acid on diphenylethane (KONOWALOFF and JATZEWITSCH), 1905, A., i, 763.

$C_{14}H_{13}O_6N$, $C_{15}H_{15}O_6N$, and $C_{16}H_{17}O_6N$, from the condensation of ethyl phenylglycinoacetate with oxalic esters in presence of alkyl oxides (DE MOUILPIED), 1905, T., 447 ; P., 64.

$C_{14}H_{14}O_2N_2$, from 4-keto-2-benzyl-4:5-dihydroglyoxaline (FINGER and ZEH), 1910, A., i, 591.

$C_{14}H_{14}O_5N_2$, from ethyl 1-cyanocyclopropane-1-carboxylate (MITCHELL and THORPE), 1910, T., 1001.

$C_{14}H_{14}O_5Br_2$, from $C_{14}H_{14}O_5$, and bromine (FEIST and REUTER), 1910, A., i, 10.

**Substance,** $C_{14}H_{16}ON_2$, from ethyl 1-methyl-3-cyclohexanone-4-carboxylate and phenylhydrazine (KÖTZ and HESSE), 1906, A., i, 88.

$C_{14}H_{17}O_4N$, from *p*-ethoxyphenylmaleimide, and its sodium derivative (PIUTTI), 1910, A., i, 23.

$C_{14}H_{18}O_9N_6$, from hydantoin and formaldehyde (BEHREND and NIEMEYER), 1909, A., i, 258.

$C_{14}H_{19}O_8N_3$, from nitration of quinol di-isobutyl ether (NIETZKI and KESSELRING), 1911, A., i, 39.

$C_{14}H_{23}O_5N$, from acetylacetoneamine and ethylidene malonate (KNOEVENAGEL, ERLER, and REINECKE), 1903, A., i, 652.

$C_{14}H_{27}O_3N_3$, from the action of formaldehyde on $C_{13}H_{25}O_2N_3$ (HENRY), 1905, A., i, 609.

$C_{14}H_{10}O_4IAg$, from silver benzoate and iodine (BUNGE), 1909, A., i, 472.

$C_{14}H_{11}ON_3S$, and its isomeride and its acetyl derivative, from phenylthiocarbamide and hydrogen peroxide (DOST), 1906, A., i, 315.

$C_{14}H_{11}O_3N_2Cl$, from nitrosobenzene and methyl 5-chloroanthranilate (FREUNDLER), 1910, A., i, 446.

$C_{14}H_{14}ONBr$, from β-bromopropiophenone and pyridine (SCHMIDT and GOEHRING), 1909, A., i, 322.

$C_{14}H_{14}O_3NS$, from sodium ω-chlorotoluene-*p*-sulphonate and dimethylaniline (BADISCHE ANILIN- & SODA-FABRIK), 1912, A., i, 176.

$C_{14}H_{23}O_3NCl_2$, from carpaine hydrochloride and chlorine (BARGER), 1910, T., 472 ; P., 53.

$C_{14}H_9ONCl_7P$, from action of phosphorus pentachloride on phenylbenzometoxazone, and on benzoylsalicylonitrile (TITHERLEY and HICKS), 1909, T., 918.

$C_{14}H_9O_2NCl_5P$, from action of phosphorus pentachloride on phenylbenzometoxazone, and on benzoylsalicylonitrile (TITHERLEY and HICKS), 1909, T., 918.

$C_{14}H_{10}O_2NCl_4P$, from phosphorus pentachloride and phenylbenzometoxazone (TITHERLEY and HICKS), 1909, T., 919.

$C_{14}H_{15}O_2NCl_6Sb$, from di-*p*-anisylamine and antimony pentachloride (WIELAND and WECKER), 1910, A., i, 243.

$C_{15}H_{10}O_6$, from extract of red clover flowers and its acetyl derivative (POWER and SALWAY), 1910, T., 239 ; P., 20.

**Substance**, $C_{15}H_{12}O_3$, from aloe-emodin (Hesse), 1908, A., i, 439.

$C_{15}H_{12}O_6$, from hydrindoneoxalic acid (3-*hydroxy-2-oxalylindene*) and acetic anhydride and sulphuric acid (Thiele and Schneider), 1909, A., i, 929.

$C_{15}H_{12}O_7$, from 1:3:4-triketo-2-methyltetrahydroisoquinoline (Freund and Beck), 1904, A., i, 619.

$C_{15}H_{14}O_4$, from catechol and acetone (Schmidlin and Lang), 1910, A., i, 837.

$C_{15}H_{14}O_7$, from ergot, and its acetyl derivative (Freeborn), 1912, P., 71.

$C_{15}H_{16}O_3$, from angelica root oil, and its derivatives (Böcker and Hahn), 1911, A., i, 313.

$C_{15}H_{16}O_3$, and its oxime and phenylhydrazone, from salicylideneacetylacetone (Knoevenagel and Arndt), 1905, A., i, 65.

$C_{15}H_{16}O_5$, from acetylacetone and $\beta\gamma\delta$-triketo-$\delta$-phenylbutane (Sachs and Wolff), 1903, A., i, 792.

$C_{15}H_{16}O_7$, from isogalloflavin trimethyl ether (Herzig, Erdös, and Ruzicka), 1910, A., i, 677.

$C_{15}H_{18}O_3$, from the action of benzaldehyde on magnesium and ethyl $\alpha$-bromoisobutyrate (Zeltner), 1908, A., i, 244.

$C_{15}H_{18}O_3$, from phenol and acetone (Schmidlin and Lang), 1910, A., i, 837.

$C_{15}H_{18}Cl_8$ (or $C_{15}H_{20}Cl_8$), from cadinene (Deussen and Lewinsohn), 1908, A., i, 354.

$C_{15}H_{20}O$, from the essential oil of hyacinths (Enklaar), 1910, A., i, 123.

$C_{15}H_{20}O_4$, from action of sodium methoxide on $C_{14}H_{14}O_5$ (Feist and Reuter), 1910, A., i, 10.

$C_{15}H_{22}O_3$, from urushiol dimethyl ether ozonides and water (Majima), 1909, A., i, 945.

$C_{15}H_{22}O_4$, from caryophyllene (Deussen and Lewinsohn), 1908, A., i, 354.

$C_{15}H_{22}O_8$, from artemisin and alkaline permanganate, and its diphenylhydrazone (Rimini), 1909, A., i, 115.

$C_{15}H_{23}Br_5$, from cadinene (Deussen and Lewinsohn), 1908, A., i, 354.

$C_{15}H_{24}O$, from the oil of *Pinus pumilo* (Böcker and Hahn), 1911, A., i, 549.

**Substance**, $C_{15}H_{24}O$, from oxidation of gurjun balsam oil, and its semicarbazone (Deussen and Philipp), 1909, A., i, 815.

$C_{15}H_{24}O_4$, from rhizome of *Cimicifuga racemosa* (Finnemore), 1910, A., i, 801.

$C_{15}H_{24}O_9$, from acetone and pyrogallol (Schmidlin and Lang), 1910, A., i, 837.

$C_{15}H_{26}O$, from diethyl ketone and methyl iodide (Haller and Bauer), 1910, A., i, 300.

$C_{15}H_8O_2N_2$, from the oxidation of indigotin, and its reduction (Perkin), 1906, P., 198.

$C_{15}H_9ON_3$, from the lactone, $C_{15}H_8O_2N_2$ (Manuelli and Silvestri), 1904, A., i, 784.

$C_{15}H_{10}O_3N_2$, and its salts and lactone, from *o*-phenylenediamine and phthalonic acid (Manuelli and Silvestri), 1904, A., i, 784.

$C_{15}H_{11}ON_3$, from hydrogen cyanide and phenylcarbimide (Dieckmann and Kämmerer), 1905, A., i, 874.

$C_{15}H_{11}O_2N$, from phthalic anhydride and 2:4-lutidine (Langer), 1906, A., i, 38.

$C_{15}H_{11}O_2Cl$, from 7-hydroxy-2-phenylbenzopyronium chloride (Decker and v. Fellenberg), 1909, A., i, 117.

$C_{15}H_{11}O_3N_3$, from $\alpha$-2:4-dinitrophenyl-$\alpha\beta$-propandione-$\alpha$-phenylhydrazone and sodium hydroxide (Borsche), 1909, A., i, 233.

$C_{15}H_{12}ON_3$, from 4-keto-1:3-diphenylpyrazolone and hydrazine (Sachs and Becherescu), 1903, A., i, 530.

$C_{15}H_{12}O_2N_2$, from 4-keto-1:3-diphenylpyrazolone and phenylhydrazine (Sachs and Becherescu), 1903, A., i, 530.

$C_{15}H_{12}O_2N_2$ (two), m.p. 186° and 120°, from benzotetronic acid and phenylhydrazine (Anschütz, Anspach, Fresenius, and Claus), 1909, A., i, 662.

$C_{15}H_{12}O_3Br_2$, from the hydrolysis of 5:5′-dibromo-2:2′-diethoxybenzophenone (Diels and Bunzl), 1905, A., i, 432.

$C_{15}H_{12}O_4N_2$, from *m*-nitro-*p*-toluidine and phthalonic acid (Manuelli and Maselli), 1906, A., i, 309.

$C_{15}H_{13}O_2N$, from phenylhydroxylamine and benzoylacetaldehyde (Alessandri), 1910, A., i, 753.

$C_{15}H_{13}O_4N$, from 6-amino-*m*-hydroxybenzoic acid and anisaldehyde (Puxeddu), 1909, A., i, 720.

**Substance,** $C_{15}H_{13}O_5N$, from 6-amino-*m*-hydroxybenzoic acid and vanillaldehyde (Puxeddu), 1909, A., i, 720.

$C_{15}H_{14}O_3N_2$, and its salts and acetyl and bromo-derivatives, from amino-orcinol monomethyl ether (Henrich and Schierenberg), 1905, A., i, 93.

$C_{15}H_{14}O_5N_2$, from substance $C_{17}H_{17}O_6N$ (from aniline and ethyl 6-ethoxycoumalin-3:5-dicarboxylate) and ammonia (Guthzeit and Eyssen), 1909, A., i, 675.

$C_{15}H_{14}O_5N_2$, from methyl cyanoacetate (Schmitt), 1904, A., i, 481.

$C_{15}H_{15}O_4N$, from the action of ethyl pyruvate on *p*-toluidine (Simon), 1908, A., i, 738.

$C_{15}H_{16}O_3N_2$, and its salts and acetyl derivatives, from amino-orcinol monomethyl ether (Henrich and Schierenberg), 1905, A., i, 93.

$C_{15}H_{17}O_2N$, from reduction of *p*-tolueneazo-*o*-phenetole (Jacobson and Huber), 1909, A., i, 853.

$C_{15}H_{17}O_3N_3$, from ethyl benzoylacetonylacetate and semicarbazide (Borsche and Fels), 1906, A., i, 510.

$C_{15}H_{17}O_3Cl$, formed as by-product in the aldoximation of anisole (Scholl and Hilgers), 1903, A., i, 348.

$C_{15}H_{18}O_2N_2$, and $C_{15}H_{21}O_4N$, from parasantonin derivatives (Francesconi), 1904, A., i, 171.

$C_{15}H_{18}NCl$, from the action of potassium ferrocyanide on *m*-toluenediazonium chloride (Ehrenpreis), 1907, A., i, 453.

$C_{15}H_{19}O_3N$, from nitrosohydroxylamino-derivatives of santonin (Francesconi and Cusmano), 1909, A., i, 724.

$C_{15}H_{21}ON$, and its acetyl derivative, from meconinemethyl isopropyl ketone (Luksch), 1905, A., i, 69.

$C_{15}H_{21}O_6N$, from ethyl camphorylidenecyanoacetate and hydrogen peroxide (Forster and Withers), 1912, T., 1336.

$C_{15}H_{22}O_4N_2$, and its nitrosochloride, from the blue caryophyllene nitrosite (Deussen and Lewinsohn), 1907, A., i, 946.

$C_{15}H_{23}O_2N$, from caryophyllene nitrosochloride (Deussen and Lewinsohn), 1907, A., i, 945.

$C_{15}H_{23}O_6N_4$ (or $C_{15}H_{23}O_7N_3$), from the blue caryophyllene nitrosite (Deussen and Lewinsohn), 1907, A., i, 946.

**Substance,** $C_{15}H_{24}O_2N_4$, from ψ-cumidine (Bresler, Friedmann, and Mai), 1906, A., i, 322.

$C_{15}H_{24}O_4N_2$, from the oxidation of sparteine (Willstätter and Marx), 1905, A., i, 545.

$C_{15}H_{24}O_{10}N_{12}$, from glyoxylic acid and guanidine (Kaess and Gruszkiewicz), 1903, A., i, 7.

$C_{15}H_{25}ON$, from diethylamine diethylcamphoformolaminecarboxylate (Tingle and Hoffmann), 1905, A., i, 800.

$C_{15}H_{27}O_2N_3$, from isonitrosoacetophenone, formaldehyde, and piperidine (Duden, Bock, and Reid), 1905, A., i, 569.

$C_{15}H_{13}ONS$, from aniline and a substance from acetophenone (Kelber), 1910, A., i, 391.

$C_{15}H_{13}ON_2Cl$, and its additive salts, from the action of *o*-nitrobenzaldehyde on dimethylaniline in presence of hydrochloric acid (Zincke and Prenntzell), 1906, A., i, 110.

$C_{15}H_{13}ON_3S$, from 5-thion-1:4-diphenylurazole (Nirdlinger and Acree), 1910, A., i, 786.

$C_{15}H_{14}ON_2S$, from formaldehyde and thiocarbamide (Opfermann), 1905, A., i, 770.

$C_{15}H_{14}N_3SCl$, from the action of acetyl chloride on β-diphenylsemithiocarbazide (Busch and Schneider), 1903, A., i, 534.

$C_{15}H_{18}O_4NNa$, from sodium ethoxide and *p*-ethoxyphenylcitraconimide (Piutti), 1907, A., i, 313.

$C_{15}H_{24}O_9N_3K_3$, from *s*-trinitrobenzene and potassium propoxide (Busch and Kögel), 1910, A., i, 474.

$C_{15}H_{22}ONCl_4Fe$, ferrichloride of the additive compound of tropine and benzyl chloride (Scholtz), 1910, A., i, 97.

$C_{16}H_{10}O_5$, from the root-bark of *Morinda citrifolia* (Oesterle and Tisza), 1908, A., ii, 527.

$C_{16}H_{10}O_6$, from the oxidation of homohydroxysalicylic acid (Duregger), 1905, A., i, 702.

$C_{16}H_{10}O_7$, from extract of red clover flowers, and its acetyl derivative (Power and Salway), 1910, T., 236 ; P., 20.

$C_{16}H_{12}O_2$, from the action of sodium hydroxide on 2-phenylbenzopyronium chloride (Decker and v. Fellenberg), 1907, A., i, 1065.

**Substance,** $C_{16}H_{12}O_4$, from *p*-benzoquinone and 2:3-dihydroxynaphthalene (Siegmund), 1909, A., i, 109.

$C_{16}H_{12}O_6$, from the seeds of *Casimiroa edulis* (Power and Callan), 1911, T., 2006; P., 258.

$C_{16}H_{14}O$, and its methyl ether, from the dehydration of 9:10-dihydroxy-9:10-dimethyldihydroanthracene (Guyot and Staehling), 1906, A., i, 17.

$C_{16}H_{14}O$, from the action of sulphuric acid on the substance from benzylphenoxyacetone and benzaldehyde (Stoermer and Wehln), 1903, A., i, 41.

$C_{16}H_{14}O_8$, and its bromide, from the action of iodine on dehydroacetic acid (Ortoleva and Vassallo), 1904, A., i, 646.

$C_{16}H_{16}O_2$, from the action of sodium ethoxide on phenylethylene glycol methyl ether (Tiffeneau), 1908, A., i, 19.

$C_{16}H_{16}O_4$, from the action of sulphuric acid on *m*-xyloquinol (Bamberger and Brun), 1907, A., i, 521.

$C_{16}H_{16}O_6$, and its bromo-derivative, from the action of heat on the sodium salt of ethyl acetoacetate (Collie and Chrystall), 1907, T., 1803; P., 231; (Collie), 1907, T., 1811.

$C_{16}H_{16}O_7$, from the condensation of methyl 2:4-dimethoxybenzoylpropionate with ethyl oxalate (Perkin and Robinson), 1908, T., 507.

$C_{16}H_{16}O_9$, from isogalloflavin trimethyl ether (Herzig, Erdös, and Ruzicka), 1910, A., i, 676.

$C_{16}H_{17}N$, and its salts, from cinnamaldehyde and methylaniline (Zincke and Würker), 1905, A., i, 243.

$C_{16}H_{18}O_2$, from santalol and formaldehyde (Stephan), 1904, A., i, 814.

$C_{16}H_{26}O_4$, frem undecoic acid and formaldehyde (Fokin), 1911, A., i, 765.

$C_{16}H_{26}O_5$, from the condensation of the aldehyde, $C_8H_{14}O_3$ (Raper), 1907, T., 1834.

$C_{16}H_{30}O$, from action of silent electric discharge on ethylene (Losanitsch), 1910, A., i, 1.

$C_{16}H_8O_3S_2$, from oxidation of "thioindigo" (Danaila), 1910, A., i, 411.

$C_{16}H_8O_4S_2$, from oxidation of "thioindigo" (Danaila), 1910, A., i, 411

**Substance,** $C_{16}H_8O_5S_2$, from oxidation of "thioindigo" (Danaila), 1910, A., i, 411.

$C_{16}H_{10}O_7N_4$, from picryl-α-naphthylamine and silver oxide (Busch and Kögel), 1910, A., i, 473.

$C_{16}H_{11}O_3N$, from nitrosophenol, α-naphthol, and alkali in acetone solution (A. and H. v. Euler), 1906, A., i, 370.

$C_{16}H_{11}O_7N_3$, from 3:5-dinitro-4-hydroxybenzoic acid and quinoline (Morgenstern), 1910, A., i, 483.

$C_{16}H_{12}ON_2$, and its derivatives, from 4-amino-2-naphthaquinone and *o*-aminophenol (Kehrmann, de Gottrau, and Leemann), 1907, A., i, 555.

$C_{16}H_{12}O_2N_2$, from fumaric acid and *p*-phenylenediamine (Warren and Grose), 1912, A., i, 961.

$C_{16}H_{12}O_3N_2$, from natural indigo (Perkin and Bloxam), 1907, T., 281; P., 30.

$C_{16}H_{12}O_3N_4$, from 4-nitro-2-phenylindone and semicarbazide (Bakunin), 1912, A., i, 344.

$C_{16}H_{13}O_2N$, from 2-methylindole and toluquinone (Möhlau and Redlich), 1912, A., i, 129.

$C_{16}H_{13}O_2N$, from α-phenylcinnamonitrile and potassium cyanide (Knoevenagel), 1904, A., i, 1028.

$C_{16}H_{13}O_3N, \frac{1}{2}H_2O$, from chrysophanic acid methyl ether and ammonia (Oesterle and Johann), 1910, A., i, 860.

$C_{16}H_{13}O_3N$ (two), from safrole and nitrosobenzene (Angeli, Alessandri, and Pegna), 1910, A., i, 552.

$C_{16}H_{13}O_5N_3$, from the substance, $C_{16}H_{16}O_5N_4$ (Heller and Sourlis), 1908, A., i, 208.

$C_{16}H_{13}N_3S$, from 8-thiocyanoquinoline and aniline (Edinger), 1908, A., i, 364.

$C_{16}H_{14}O_3N$, from anisaldehydecyanohydrin and hydrogen chloride (McCombie and Parry), 1909, T., 587; P., 95.

$C_{16}H_{14}O_4N_2$, from indigo-brown (Perkin and Bloxam), 1907, T., 284; P., 30.

$C_{16}H_{14}O_4S_2$, from sulphur monochloride and silver *o*-, *m*-, and *p*-toluates (Denham), 1909, T., 1239.

$C_{16}H_{14}O_4S_2$, from sulphur monochloride and silver phenylacetate (Denham), 1909, T., 1239.

**Substance**, $C_{16}H_{14}O_5S$, from oxidation of ester, $C_{16}H_{18}O_5S$, from 3:5-dimethylol-*p*-cresol, sodium hydroxide, and toluenesulphonyl chloride (Ullmann and Brittner), 1909, A., i, 591.

$C_{16}H_{14}O_6N_2$, from the action of hydrazine hydrate on dehydracetic acid (Stollé), 1905, A., i, 839.

$C_{16}H_{14}O_6N_4$ and its salts, from dinitrophenyldipyridinium dichloride and alkali (Zincke and Weisspfenning), 1910, A., i, 585.

$C_{16}H_{16}ON_2$, from β-naphthol and phenylhydrazine (Ciusa and Bernardi), 1909, A., i, 675.

$C_{16}H_{16}O_5N_4$, and its reactions (Heller and Sourlis), 1908, A., i, 208.

$C_{16}H_{18}O_3N_2$, and its isonitroso-derivative, from ethyl acetoacetate and phenylmethylpyrazolone (Stollé), 1905, A., i, 838.

$C_{16}H_{18}O_6N_{12}$, and $C_{18}H_{18}O_6N_{12}$, from glycoluril and formaldehyde (Behrend, Meyer, and Rusche), 1905, A., i, 419.

$C_{16}H_{19}O_2N$, and its semicarbazone, from the action of sodium and amyl formate on propyl benzoyl-δ-aminobutyl ketone (v. Braun and Steindorff), 1905, A., i, 812.

$C_{16}H_{19}O_6N$, from the condensation of triacetic lactone and ethyl β-aminocrotonate (Fleischmann), 1907, T., 256 ; P., 16.

$C_{16}H_{19}O_8N_3$, from methyl cyanoacetate (Schmitt), 1904, A., i, 481.

$C_{16}H_{20}ON_2$, from $\Delta^{1:4(8)}$-terpadien-2-ol-3-one and *o*-phenylenediamine (Manasse and Samuel), 1903, A., i, 45.

$C_{16}H_{20}O_3N_2$, from Michlers' ketone and resorcinol (Meyer and Pfotenhauer), 1907, A., i, 422.

$C_{16}H_{20}O_8N_2$, from the electrolysis of ethyl sodiocyanomalonate (Ulpiani and Rodano), 1905, A., i, 260.

$C_{16}H_{21}O_2N$, from dimethylketen and benzylidenemethylamine (Staudinger, Klever, and Kober), 1910, A., i, 588.

$C_{16}H_{21}O_4N_3$, from the action of aniline on $C_{10}H_{15}O_6N_3$ (Amenomiya), 1905, A., i, 603.

$C_{16}H_{21}O_8P$, from picrotin and phosphorus pentachloride (Horrmann), 1910, A., i, 577.

$C_{16}H_{22}O_2N_2$, from ethyl 3-amino-1-methylcyclohexane-4-carboxylate (Kötz and Merkel), 1909, A., i, 157.

**Substance**, $C_{16}H_{23}O_{13}N,3H_2O$, from the hydrolysis of copper chondroitinsulphate (Fränkel), 1907, A., i, 369.

$C_{16}H_{14}ON_2S$, condensation product of 3-oxy-1-thionaphthen with *p*-nitrosodimethylaniline (Badische Anilin- & Soda-Fabrik), 1910, A., i, 60.

$C_{16}H_{14}ON_2S_2$, from dibenzylamine, bromoacetal, and carbon disulphide (v. Braun), 1903, A., i, 16.

$C_{16}H_{15}ON_2Cl$, from α-2-chloro-1-naphthylpentan-γ-one and semicarbazide (Sachs and Brigl), 1911, A., i, 721.

$C_{16}H_{15}ON_3S$, from the oxidation of *p*-tolylthiocarbamide and its isomeride, and its compound with phenylcarbimide (Dost), 1906, A., i, 315.

$C_{16}H_{15}O_2NS$, from *o*-tolylthiourethane and bromoacetophenone (v. Walther and Greifenhagen), 1907, A., i, 552.

$C_{16}H_{15}O_3N_3S$, from the action of nitrogen sulphide on anisaldehyde (Francis and Davis), 1904, T., 1536 ; P., 204.

$C_{16}H_{18}O_2NCl$, from ω-chloro-*p*-toluic acid (Badische Anilin- & Soda-Fabrik), 1912, A., i, 355.

$C_{16}H_{18}O_4NNa$, from the sodium derivative of dimethylacetone and *p*-ethoxyphenylcitraconimide (Piutti), 1907, A., i, 313.

$C_{16}H_{12}O_6N_2S_2Na_2$, from 1-naphthol-4-sulphonic acid, phenylhydrazine and sodium hydrogen sulphite (Bucherer and Sonnenburg), 1910, A., i, 145.

$C_{17}H_{10}O_3$, from the reduction of anhydrophthalylbis-1:3-indanedione (Marchese), 1907, A., i, 941.

$C_{17}H_{13}N$, and its hydrochloride and acetyl derivative, from the action of nitrous acid on *p*-tolyl-β-naphthylamine (Bucherer and Seyde), 1907, A., i, 345.

$C_{17}H_{14}O_2$, and its acetate, from dibenzylideneacetone, sulphuric acid, and acetic anhydride (Vorländer and Schroedter), 1903, A., i, 496.

$C_{17}H_{14}O_2$, from oxidation of 1-benzoyl-1-benzylcyclopropane (Haller and Benoist), 1912, A., i, 570.

$C_{17}N_{16}N_2$, from interaction of magnesium phenyl bromide and 3:3-dimethylindolenine-2-carboxylonitrile, and its oxime and *p*-nitrophenylhydrazone (Plancher and Giumelli), 1910, A., i, 63.

**Substance**, $C_{17}H_{18}O$, from hydrindene (Gattermann), 1906, A., i, 592.

$C_{17}H_{18}O_2$, from benzophenone and ethyl ether (Paternò and Chieffi), 1911, A., i, 65.

$C_{17}H_{20}O_3$, obtained as a by-product in the aldoximation of phenetole (Scholl and Kremper), 1903, A., i, 348.

$C_{17}H_{24}O_6$, from acetylacetone and formaldehyde (Rabe and Elze), 1904, A., i, 749.

$C_{17}H_{12}O_7N_2$, from 3:5-dinitro-4-hydroxybenzoic acid and naphthalene (Morgenstern), 1910, A., i, 482.

$C_{17}H_{13}ON$, from dibenzylideneacetone dibromide (Groebel), 1903, A., i, 497.

$C_{17}H_{13}O_2N_5$, from *p*-nitrobenzyl cyanide and *p*-nitroso-ω-cyanodimethylaniline (Warunis and Sachs), 1904, A., i, 669.

$C_{17}H_{13}O_5N$, from the ethyl ester of the acid $C_4H_4O_3N_2$ and benzyl alcohol (Frerichs and Hartwig), 1906, A., i, 164.

$C_{17}H_{14}ON_2$, from the oxidation of α-dibenzylideneacetonehydroxylamineoxime (Minunni and Ciusa), 1906, A., i, 95.

$C_{17}H_{14}O_2N$, from α- or β-naphthaquinone and *p*-methylthiolaniline (Zincke and Jörg), 1911, A., i, 40.

$C_{17}H_{14}O_2N_2$, from indigotin and magnesium methyl bromide (Sachs and Kantorowicz), 1909, A., i, 425.

$C_{17}H_{14}O_3N_4$, from *o*-nitrobenzaldehyde and 4-amino-1-phenyl-3-methyl-5-pyrazolone (Heiduschka and Rothacker), 1912, A., i, 52.

$C_{17}H_{14}O_4N_4$, from 1-phenyl-5-triazolone-4-carboxylic acid and methyl alcohol (Dimroth and Eberhardt), 1905, A., i, 100.

$C_{17}H_{14}O_6Br_2$, from the reduction of β-bromocarmin (Rohde and Dorfmüller), 1910, A., i, 492.

$C_{17}H_{15}O_2N_5$ (two), from nitrosodipyromeconic acid and phenylhydrazine, and their derivatives (Peratoner), 1912, A., i, 299.

$C_{17}H_{15}O_4N$, from anhydro-β-methyltricarballylic acid and α-naphthylamine (Hope), 1912, T., 911.

$C_{17}H_{16}O_2N_2$, from benzoyl chloride, sodium hydroxide, and 4-methylglyoxaline (Inouye), 1907, A., i, 482.

$C_{17}H_{16}O_2N_4$, from the action of phenylhydrazine on methyl or ethyl formylsuccinate (Wislicenus, Böklen, and Reuthe), 1909, A., i, 11.

**Substance**, $C_{17}H_{16}O_2Br_4$, from the action of boiling sodium hydroxide on the condensation product of 3:5-dibromo-4-hydroxy-2:6-dimethylbenzyl bromide with pyridine or diethylamine (Auwers and Rietz), 1907, A., i, 919.

$C_{17}H_{18}O_2N_2$, from the reduction of disalicylideneacetonehydroxylamineoxime (Minunni and Ciusa), 1906, A., i, 96.

$C_{17}H_{18}O_3N_2$, from oxidation of 4:5-diphenyglyoxalone (Biltz and Rimpel), 1909, A., i, 742.

$C_{17}H_{18}O_3N_2$, from the interaction of *p*-nitrobenzyl chloride and isonitrosocamphor (Forster and Holmes), 1908, T., 248; P., 8.

$C_{17}H_{18}O_4N_2$, from ethyl benzoylglyoxylate and phenylhydrazine (Wahl), 1907, A., i, 362.

$C_{17}H_{19}O_4N$, from benzoylacetoneamine and ethylidene malonate (Knoevenagel, Erler, and Reinecke), 1903, A., i, 652.

$C_{17}H_{19}O_7N_3$, from ethyl tetrolate, ethyl oxalate, and *p*-nitrophenylhydrazine (Feist), 1906, A., i, 332.

$C_{17}H_{20}O_4N_2$ (m.p. 175°), from the interaction of *p*-nitrobenzyl chloride and isonitrosocamphor (Forster and Holmes), 1908, T., 248; P., 8.

$C_{17}H_{20}O_4N_2$ (m.p. 114°), from the interaction of *p*-nitrobenzyl bromide and isonitrosocamphor (Forster and Holmes), 1908, T., 250; P., 9.

$C_{17}H_{21}ON$, and its picrate and bromo-derivative, from the action of ammonium formate on benzoylcamphor (Forster), 1903, T., 108.

$C_{17}H_{21}ON$, and its picrate, platinichloride, and benzoyl derivative, from the action of alcoholic ammonia on phenylchloromethylenecamphor (Forster), 1903, T., 106.

$C_{17}H_{21}N_3S$, from camphorylphenylthiosemicarbazide (Forster and Jackson), 1907, T., 1890; P., 242.

$C_{47}H_{23}O_3N_3$, from *d*-leucyl-*l*-tryptophan (Fischer), 1910, A., i, 22.

$C_{17}H_{26}O_2Cl_8$, from fatty acids in cod liver oil (Heiduschka and Rheinberger), 1910, A., i, 297.

$C_{17}H_{11}O_6N_4Cl$, from picryl chloride and methyl-α-naphthylamine (Busch and Kögel), 1910, A., i, 473.

$C_{17}H_{14}O_3NCl$, from quinolylacetylveratrole and hydrochloric acid (Mannich and Hübner), 1911, A., i, 566.

**Substance**, $C_{17}H_{14}O_4N_2S_2$, from immedial-indone (Frank), 1910, T., 2045 ; P., 218.

$C_{17}H_{15}N_2Cl_3Hg_2$, from dinitrophenylpyridinium chloride and *p*-aminophenyl mercuriacetate (Reitzenstein and Stamm), 1910, A., i, 348.

$C_{17}H_{81}O_3NCl_2$, from ethyl ω-2-dichlorotoluene-*p*-sulphonate and dimethylaniline (Badische Anilin- & Soda-Fabrik), 1912, A., i, 176.

$C_{17}H_{26}O_2Cl_4I_4$, from fatty acids of cod liver oil (Heiduschka and Rheinberger), 1910, A., i, 297.

$C_{17}H_{27}O_2BrMg$, from action of magnesium on *p*-tolyl ethyl ketone and allyl bromide (Grishkewitsch-Trochimowsky), 1910, A., i, 109.

$C_{17}H_{32}O_7N_4S_2$, from ethyl oxalomalonate and ethyl-ψ-thiocarbamide hydrobromide (Wheeler), 1907, A., i, 973.

$C_{17}H_{16}ON_2Cl_2Hg_2$, from dinitrophenylpyridinium chloride and *p*-aminophenyl mercuriacetate (Reitzenstein and Stamm), 1910, A., i, 348.

$C_{18}H_{10}O_5$, from hydroxymethylenephthalide (Gabriel), 1907, A., i, 215.

$C_{18}H_{12}O_3$, from the action of phenylhydrazine on the substance, $C_{33}H_{22}O_7$ (Scharwin), 1905, A., i, 448.

$C_{18}H_{12}O_6$, from oxidation of bisdiketohydrindene, and its acetyl and benzoyl derivatives and methyl ether (Voswinckel), 1909, A., i, 166.

$C_{18}H_{12}O_8$, from kermesic acid and hydriodic acid (Dimroth), 1910, A., i, 488.

$C_{18}H_{13}N_8$, and its salts, from the compound, $C_{18}H_{14}N_3I$, from benzaldehydephenylhydrazone and iodine in pyridine solution (Ortoleva), 1907, A., i, 729.

$C_{18}H_{14}O_3$ and $C_{18}H_{14}O_4$, from the oxidation of methylcoumaranones (Fries and Finck), 1909, A., i, 44.

$C_{18}H_{16}O$, from the action of magnesium ethyl bromide on anthraquinone (Clarke), 1908, A., i, 331.

$C_{18}H_{16}O_6$, from *p*-benzoquinone and catechol (Siegmund), 1909, A., i, 109.

$C_{18}H_{16}O_6$, from 3-hydroxymethylfluorone (Kehrmann and Jones), 1910, A., i, 409.

**Substance**, $C_{18}H_{16}N_2$, from phenylacetonitrile, quinoline, methyl sulphate and sodium ethoxide (Kaufmann), 1912, A., i, 1017.

$C_{18}H_{16}S$, from the action of sulphur on resin oil (Schultze), 1908, A., i, 356.

$C_{18}H_{18}O_5$, from glaucophanic acid methyl ester (Liebermann), 1906, A., ii, 556.

$C_{18}H_{18}N_4$, from methylanilinoacetonitrile and cyanogen bromide (v. Braun), 1908, A., i, 625.

$C_{18}H_{20}O_3$, from phenylcyanomethylenecamphor and sulphuric acid (Forster and Withers), 1912, T., 1338.

$C_{18}H_{20}O_4$, from oxidation of laudanosine (Pyman), 1909, T., 1269.

$C_{18}H_{20}O_9$, from isogalloflavin trimethyl ether (Herzig, Erdös, and Ruzicka), 1910, A., i, 676.

$C_{18}H_{22}O_5$, from the expressed oil of nutmeg (Power and Salway), 1908, T., 1655 ; P., 198.

$C_{18}H_{24}O_4$, from acenaphthenequinone and ethyl acetoacetate (Recchi), 1903, A., i, 261.

$C_{18}H_{26}O$, from cyclohexanone and potassium hydroxide (Wallach and Behnke), 1909, A., i, 813.

$C_{18}H_{28}O$, from ψ-euphorbone (Tschirch and Leuchtenberger), 1908, A., i, 196.

$C_{18}H_{32}O_2$, from lichesteric acid (Böhme), 1903, A., i, 316.

$C_{18}H_{32}O_2$, analogue of stearolic acid, from petroselic acid (Vongerichten and Köhler), 1909, A., i, 454.

$C_{18}H_{36}O$, from jalap (Power and Rogerson), 1909, A., i, 819.

$C_{18}H_4O_6Br_8$, and its acyl derivatives, from tetrabromo-*o*-benzoquinone (Jackson and Carlton), 1905, A., i, 908.

$C_{18}H_4O_6Br_{14}$, from the "urucuri" fruit (Frank and Gnädinger), 1911, A., ii, 647.

$C_{18}H_{10}OS$, from phenanthraquinone and thiophen (Oster), 1904, A., i, 915.

$C_{18}H_{11}O_7N$, from ester, $C_{20}H_{13}O_6N$ (Willgerodt and Maffezzoli), 1910, A., i, 679.

$C_{18}H_{12}O_2S_3$, from $C_9H_8OS_2$, and ammonium persulphate (Kelber) 1910, A., i, 391.

$C_{18}H_{12}O_6N_2$, from oxalyldiacetophenone and nitrous fumes (Widman and Virgin), 1909, A., i, 656.

**Substance**, $C_{18}H_{13}ON$, from 7-hydroxy-1:2-phenonaphthacridine (Baezner and Gardiol), 1906, A., i, 887.

$C_{18}H_{13}O_2Br_3$, from tetrabromo-3:4-dimethoxyvinylphenanthrene (Pschorr, Jaeckel, and Fecht), 1903, A., i, 195.

$C_{18}H_{13}O_3N$, from 1-hydroxy-2-naphthaldehyde and anthranilic acid (Bezdzik and Friedländer), 1909, A., i, 416.

$C_{18}H_{14}O_3N_2$, and its chloride, from 4-acetylamino-β-naphthaquinone and *o*-aminophenol (Kehrmann, de Gottrau, and Leemann), 1907, A., i, 555.

$C_{18}H_{14}O_9N_4$, from β-naphthol and 2:3:5-trinitro-4-acetylaminophenol (Meldola and Hay), 1908, P., 211.

$C_{18}H_{15}ON$, from 2-methylquinoline methiodide and benzoyl chloride (Vongerichten and Rotta), 1911, A., i, 677.

$C_{18}H_{15}O_3N$, from thalline and phthalic anhydride (Renz and Hoffmann), 1904, A., i, 610.

$C_{18}H_{15}O_7N$, from chloroxylonine and hydriodic acid (Auld), 1909, T., 967.

$C_{18}H_{16}ON_2$, from oxidation of 2-methylindole (Plancher and Colacicchi), 1911, A., i, 566.

$C_{18}H_{16}OS$, from 1-keto-2:6-diphenyl-4-thiophen-3:5-dithiol (Apitzsch and Metzger), 1904, A., i, 510.

$C_{13}H_{16}O_2N_2$, from isobenzylglyoxalidone and sodium hydroxide (Finger and Zeh), 1910, A., i, 591.

$C_{18}H_{16}O_2N_2$, from the action of potassium hypochlorite on cinnamamide (Weerman), 1907, A., i, 132.

$C_{18}H_{16}O_2N_2$, from indigotin and magnesium ethyl bromide, and its diethyl derivative (Sachs and Kantorowicz), 1909, A., i, 425.

$C_{18}H_{16}O_5N_4$, from action of phenylhydrazine on oxidation products of mucic acid (Ferraboschi), 1909, T., 1249.

$C_{18}H_{17}ON_3$ (two), from ethyl α-cyanopropionate and benzaldehyde (Beccari), 1904, A., i, 62.

$C_{18}H_{17}O_2N_5$, from the monosemicarbazone of *o*-methoxyphenyltriketobutane and phenylenediamine (Sachs and Herold), 1907, A., i, 629.

$C_{18}H_{17}O_{11}N$, from tannin, ethyl carbamate, and formaldehyde (Voswinkel), 1905, A., i, 805.

**Substance**, $C_{18}H_{18}O_2N_2$, from aniline and 6-chloro-3-methyl-α-pyrone (Thole and Thorpe), 1911, T., 2225.

$C_{18}H_{18}O_2N_4$, from chloralurethane (Diels and Gukassianz), 1911, A., i, 24.

$C_{18}H_{18}O_4N_2$, from oxidation of substance, $C_{18}H_{16}O_2N_2$, from indigotin and magnesium ethyl bromide (Sachs and Kantorowicz), 1909, A., i, 425.

$C_{18}H_{18}N_3I$, from the action of iodine on benzaldehydephenylhydrazone in pyridine solution (Ortoleva), 1904, A., i, 99.

$C_{18}H_{19}O_3N$, from ethyleugenol and nitrosobenzene (Angeli, Alessandri and Pegna), 1910, A., i, 553.

$C_{18}H_{21}O_2N$, from phenylcyanomethylenecamphor and sodium hydroxide (Forster and Withers), 1912, T., 1338.

$C_{18}H_{21}O_3N$, EtOH, and its anhydride, from phenylcyanomethylenecamphor and hydrogen peroxide (Forster and Withers), 1912, T., 1339.

$C_{18}H_{22}O_2N_2$, from acetone and phenylhydroxylamine (Beckmann and Scheiber), 1907, A., i, 829.

$C_{18}H_{22}O_2N_4$, from catechol and phenylhydrazine (Ciusa and Bernardi), 1909, A., i, 676.

$C_{18}H_{22}O_4N_2$, from hæmopyrrolecarboxylic acid (Piloty), 1909, A., i, 540.

$C_{18}H_{24}O_4N_2$ (?), from hæmopyrrolecarboxylic acid (Piloty), 1909, A., i, 540.

$C_{18}H_{24}O_4N_4$, from hexamethylenetetramine and catechol (Grishkewitsch-Trochimowsky), 1910, A., i, 108.

$C_{18}H_{29}OCl_3$, from the compound, $C_9H_{15}OCl$, and hydrogen chloride (Wallach and Heyer), 1908, A., i, 425.

$C_{18}H_{36}O_7S$, from ricinoleic acid and sulphuric acid (Grün and Woldenberg), 1909, A., i, 284.

$C_{18}H_{12}O_2N_2Br_2$, from 5:7-dibromoisatin and 2-methylquinoline (Kohn and Klein), 1912, A., i, 800.

$C_{18}H_{15}ON_2Cl$, from diphenylcarbamyl chloride and pyridine, salts of (v. Meyer and Nicolaus), 1911, A., i, 121.

$C_{18}H_{17}O_6N_4Cl$, from the action of nickel on carbazole (Padoa and Chiaves), 1908, A., i, 105.

**Substance**, $C_{18}H_{19}ON_2Br$, from *p*-bromophenyl-ω-bromoamylcyanamide (v. Braun), 1907, A., i, 961.

$C_{18}H_{21}O_3N_2Br$, from the action of *p*-bromophenylhydrazine on camphoroxalic acid (Tingle and Robinson), 1906, A., i, 904.

$C_{18}H_{24}O_4NNa$, from sodium amyloxide and *p*-ethoxyphenylcitraconimide (Piutti), 1907, A., i, 313.

$C_{19}H_{10}O_6$, from the action of phosphorus pentachloride on the trilactone, $C_{19}H_{12}O_7$ (Gabriel), 1907, A., i, 1043.

$C_{19}H_{12}O_4$, from 3-phenylpyrazoisocoumarazone and resorcinol (Michaelis and Leo), 1910, A., i, 516.

$C_{19}H_{14}O_5$, from 3-methylpyrazoisocoumarazone and resorcinol (Michaelis and Leo), 1910, A., i, 516.

$C_{19}H_{16}O_2$ and $C_{19}H_{18}O_3$, from 1:4:5-trihydroxy-4:5-diphenyl-1:3-dimethylcyclopentan-2-one (Japp and Michie), 1903, T., 304.

$C_{19}H_{17}N_3$, from paramagenta (v. Baeyer and Villiger), 1904, A., i, 454.

$(C_{19}H_{18}O_3)_x$, from dimethylthebainemethine methiodide (Knorr and Pschorr), 1905, A., i, 814.

$C_{19}H_{20}O_5$, and its dibenzoyl derivative, from guaiacum resin (Richter), 1906, A., i, 442.

$C_{19}H_{22}N_2$, and its salts, from dinitrophenylpyridinium chloride and methylaniline (Zincke and Würker), 1905, A., i, 241.

$C_{19}H_{24}O_2$, and its tetrabromo-derivative, from *m*-xylenol, formaldehyde, and sodium hydroxide (Auwers), 1907, A., i, 612.

$C_{19}H_{28}O_{10}$, from biliary acids (Pregl), 1910, A., i, 321.

$C_{19}H_{13}O_6N$, from the action of potassium cyanide on ω-bromoacetophenone-*o*-carboxylic acid (Gabriel), 1907, A., i, 216.

$C_{19}H_{14}O_7N_2$, from 3:5-dinitro-4-hydroxybenzoic acid and acenaphthene (Morgenstern), 1910, A., i, 482.

$C_{19}H_{15}ON$, from oxidation of β-phenyl-β-diphenylmethylhydroxylamine (Angeli, Alessandri, and Aiazzo-Mancini), 1911, A., i, 544.

$C_{19}H_{16}O_2N_3$, from 3-amino-3-methyl-4-quinazolone, nitrous acid, and β-naphthol (Bogert and Gortner), 1909, A., i, 679.

$C_{19}H_{16}O_2N_4$, from indoxylic acid and nitrosoantipyrine (Bechhold), 1904, A., i, 200.

**Substance**, $C_{19}H_{16}O_2Cl_2$, from 2:5-dihydroxytriphenylcarbinol (v. Baeyer, Aickelin, Diehl, Hallensleben, and Hess), 1910, A., i, 249.

$C_{19}H_{16}O_3N_2$, from *o*-amino-*m*-cresol and 4-acetylamino-β-naphthaquinone (Kehrmann, de Gottrau, and Leemann), 1907, A., i, 555.

$C_{19}H_{17}ON_3$, from cinnamaldehyde and 4-amino-1-phenyl-3-methyl-5-pyrazolone (Heiduschka and Rothacker), 1912, A., i, 52.

$C_{19}H_{17}O_2N$, from formaldehyde and 2:8-dimethylquinoline (Hoffmann), 1906, A., i, 41.

$C_{19}H_{18}O_2N_2$, from *p*-benzoquinone and diaminodiphenylmethane (Siegmund), 1910, A., i, 749.

$C_{19}H_{18}O_2N_2$, from indigotin and magnesium propyl bromide (Sachs and Kantorowicz), 1909, A., i, 425.

$C_{19}H_{18}O_2Cl_4$, from the benzene solution of dianisylidene and phosphorus pentachloride (Straus and Ecker), 1906, A., i, 861.

$C_{19}H_{19}ON$, from 2:3:3:5-tetramethylindolenine, benzoyl chloride, and sodium hydroxide (Plancher and Carrasco), 1909, A., i, 959.

$C_{19}H_{19}O_3N_3$, from 3-nitrocumaldehyde and phenylmethylpyrazolone (Pizzuti), 1911, A., i, 62.

$C_{19}H_{19}O_3N_3$, from the action of ammonia on ethyl or methyl diphenylpiperidonedicarboxylate (Tsoneff), 1912, A., i, 580.

$C_{19}H_{19}O_6N$, and its hydrochloride, from cotarnine and catechualdehyde (Renz and Hoffmann), 1904, A., i, 611.

$C_{19}H_{20}ON_2$, from the action of ethyl pyruvate on *p*-toluidine (Simon), 1908, A., i, 738.

$C_{19}H_{20}O_3N_2$, from diphenylcarbamide, ethyl acetoacetate, and ether (Kiessling), 1906, A., i, 946.

$C_{19}H_{20}N_2Br_2$, and its salts, from dinitrophenylpyridinium chloride and *p*-bromomethylaniline (Zincke and Würker), 1905, A., i, 242.

$C_{19}H_{21}O_5N$, from the action of ozone on thebaine (Riedel), 1908, A., i, 1006.

$C_{19}H_{22}O_2N_2$, from the action of pyruvic acid on *p*-toluidine (Simon), 1908, A., i, 687.

$C_{19}H_{23}O_8N_3$, from xanthophanic acid ethyl ether and semicarbazide hydrochloride (Liebermann), 1906, A., i, 557.

**Substance,** $C_{19}H_{24}O_4N_2$, from camphoroxalic acid and benzamidine (Tingle and Hoffmann), 1905, A., i, 800.

$C_{19}H_{24}O_8N_6$, from asparagine (Sasaki), 1907, A., i, 776.

$C_{19}H_{39}O_2N_3$, from the decomposition of oleic acid ozonide (Molinari and Barosi), 1908, A., i, 850.

$C_{19}H_{19}N_2ClHg$, from 3-mercury-*p*-toluidine and dinitrophenylpyridinium chloride (Reitzenstein and Stamm), 1910, A., i, 348.

$C_{20}H_{11}O_3$, obtained in the preparation of 2:3-dihydroxynaphthalene (Neil), 1906, A., i, 356.

$C_{20}H_{12}O_3$, from the oxidation of 3:5-dihydroxytritanolactone (v. Liebig), 1905, A., i, 783.

$C_{20}H_{12}O_3$, from the oxidation of $\beta\beta$-dinaphthol (Bünzly and Decker), 1905, A., i, 884.

$C_{20}H_{12}O_4$, from *p*-benzoquinone and 1:2-dihydroxynaphthalene (Siegmund), 1909, A., i, 109.

$C_{20}H_{14}O_5$, and $C_{20}H_{16}O_6$, and their phenylhydrazones and semicarbazones, from $\alpha$-phenylbutane-$\alpha\beta\gamma$-trione and piperidine (Sachs and Wolff), 1903, A., i, 793.

$C_{20}H_{17}N_5$, from *N*-hydroxydioxindole and phenylhydrazine (Heller and Sölling), 1909, A., i, 184.

$C_{20}H_{18}O$, from the hydrolysis of the substance, $C_{23}H_{22}O_3$ (Vorländer and Staudinger), 1906, A., i, 366.

$C_{20}H_{18}O_2$, from the interaction of benzyl chloride and resorcinol (Bakunin and Alfano), 1907, A., i, 915.

$C_{20}H_{18}O_9$, and its acetates, bromo-derivatives, and hydrazones, from glaucophanic acid methyl ether (Liebermann and Truchsäss), 1907, A., i, 890.

$C_{20}H_{18}N_2$, from 2-methylindole, ethyl acetate, and sodium ethoxide (Angeli and Marchetti), 1908, A., i, 208.

$C_{20}H_{19}N$, and its salts, from 4-methylquinoline and cuminaldehyde (Loew), 1903, A., i, 578.

$C_{20}H_{20}O_5$, and its acetyl, methyl, and benzoyl derivatives, from papaverinium methiodide (Decker and Dunant), 1908, A., i, 206.

$C_{20}H_{22}O_2$, from $\beta$-phenyl-$\beta$-2-cyclopentanonylpropiophenone, hydriodic acid and phosphorus (Georgi and Volland), 1912, A., i, 781.

$C_{20}H_{22}O_3$, from Chinese anise oil (Tardy), 1903, A., i, 46.

**Substance,** $C_{20}H_{22}O_5$, from methyl chloroformate and ostruthin (Herzog and Krohn), 1910, A., i, 125.

$C_{20}H_{22}O_5$, and its bromophenylhydrazine, from xanthophanic acid ethyl ether (Liebermann), 1906, A., i, 556.

$C_{20}H_{22}O_6$, from dihydroflavaspidylxanthen (Boehm), 1904, A., i, 407.

$C_{20}H_{22}N_4$, from ethylanilinoacetonitrile and cyanogen bromide (v. Braun), 1908, A., i, 625.

$C_{20}H_{22}N_4$, and its hydrochloride, from the action of magnesium phenyl bromide on ethoxy- or methoxy-caffeine (Schulze), 1907, A., i, 546.

$C_{20}H_{24}O_2$, from 2-hydroxy-4-methylphenyldimethylcarbinol (Fries and Fickewirth), 1908, A., i, 824.

$C_{20}H_{30}O$, from camphenilanaldehyde (Fromm, Hildebrandt, and Clemens), 1903, A., i, 429.

$C_{20}H_{30}O_5$, from bryony root (Power and Moore), 1911, T., 940; P., 118.

$C_{20}H_{31}O_8$, from *Adenium hongkel* (Perrot and Leprince), 1910, A., ii, 151.

$C_{20}H_{32}O_2$, from the condensation of camphor and $C_{23}H_{28}O_2$ (Malmgren), 1903, A., i, 103.

$C_{20}H_{34}O$, from the seeds of *Brucea sumatrana* (Power and Lees), 1903, A., i, 772.

$C_{20}H_{38}O_2$, from the oxidation of phytol (Willstätter and Hocheder), 1907, A., i, 786.

$C_{20}H_{10}OS_2$, from phenanthraquinone and thiophthen (Oster), 1904, A., i, 915.

$C_{20}H_{12}O_2N_4$, from the diazotised chloride from 7-amino-2-naphthol (Kaufler and Karrer), 1907, A., i, 796.

$C_{20}H_{13}O_4N_3$, from *o*-aminophthalanil (Rupe and Thiess), 1910, A., i, 73.

$C_{20}H_{13}O_4N_5$, from the action of amyl nitrite on phenyl-*m*-nitrobenzylidenehydrazine (Bamberger and Pemsel), 1903, A., i, 285.

$C_{20}H_{14}N_2S_2$, from diazotriphenylpyrrole (Angelico and Labisi), 1910, A., i, 445.

$C_{20}H_{15}O_{18}Br_5$, from the flowers of *Nyctanthes arbor-tristis* (Hill and Sirkar), 1907, T., 1505; P., 213.

**Substance**, $C_{20}H_{16}O_4Cl_2$, from oxalyl chloride and cinnamaldehyde (Staudinger), 1909, A., i, 906.

$C_{20}H_{17}ON$, from oxidation of β-benzyl-β-diphenylmethylhydroxylamine (Angeli, Alessandri, and Aiazzo-Mancini), 1911, A., i, 545.

$C_{20}H_{17}ON$, and its benzoyl derivative and additive salts, from the reduction of 6-phenylpyrophthalone (Gaebelé), 1904, A., i, 89.

$C_{20}H_{18}ON_2$, from the acid, $C_{21}H_{18}O_3N_2$ (Knoevenagel and Heeren), 1903, A., i, 660.

$C_{20}H_{19}O_2N$, from the action of formaldehyde on β-naphtholbenzylamine (Betti and Foà), 1903, A., i, 511.

$C_{20}H_{20}ON_4$, and its additive salts, from the action of magnesium phenyl bromide on caffeine (Schulze), 1907, A., i, 545.

$C_{20}H_{20}O_2N_2$, from indigotin and magnesium isobutyl bromide (Sachs and Kantorowicz), 1909, A., i, 425.

$C_{20}H_{21}O_2N_3$, from lysine (v. Braun), 1909, A., i, 230.

$C_{20}H_{21}O_3Cl_3$ (two), from ββ-dichloro-αγ-dianisylidenepropane and methyl alcohol (Straus, Lutz, and Hüssy), 1910, A., i, 564.

$C_{20}H_{21}O_4N$, from the alkaloid, $C_{20}H_{17}O_4N$, from Chinese Corydalis tubers (Makoshi), 1908, A., i, 825.

$C_{20}H_{21}O_{11}N_3$, from methyl αγ-dicyanopropane-αββγ-tetracarboxylate (Schmitt), 1907, A., i, 1007.

$C_{20}H_{22}O_2N_2,\frac{1}{2}H_2O$, from quinoline and methyl salicylate (Spady), 1908, A., i, 915.

$C_{20}H_{22}O_5N_3$, from 1:3-dioximino-2-cyclohexanone, sodium ethoxide, and benzoyl chloride (Borsche), 1910, A., i, 178.

$C_{20}H_{24}O_3N_2$, from quinine (Wolffenstein and Wolff), 1908, A., i, 283.

$C_{20}H_{24}O_7N_2$, from condensation of ethyl 1-amino-2:5-dimethylpyrrole-3:4-dicarboxylate with dehydracetic acid (Bülow and Filchner), 1909, A., i, 95.

$C_{20}H_{26}O_2N_2$, from acetone and *m*- or *p*-tolylhydroxylamine (Beckmann and Scheiber), 1907, A., i, 829.

$C_{20}H_{26}O_4N_4$, from silver salt of pernitrosocamphor (Angeli, Castellana, and Ferrero), 1909, A., i, 739.

**Substance**, $C_{20}H_{28}O_2Hg_3$, from action of potassium hydroxide on $C_{30}H_{42}O_3I_2Hg_4$ (Marsh and Struthers), 1909, T., 1787.

$C_{20}H_{28}NCl$, from γ-phenylpropyl chloride and dimethylamine (v. Braun), 1911, A., i, 35.

$C_{20}H_{28}NBr$, from γ-phenylpropyl bromide and dimethylamine (v. Braun), 1911, A., i, 35.

$C_{20}H_{29}O_2N_3$, from sodium salt of substance $(C_{10}H_{15}O_2N_2)_2$, and picrate of (Angeli, Castellana, and Ferrero), 1909, A., i, 739.

$C_{20}H_{30}O_4N_4$, from pernitrosocamphor, diethyl derivative, and sodium salt of (Angeli, Castellana, and Ferrero), 1909, A., i, 739.

$C_{20}H_{30}N_2I_2$, from diphenyldiethylethylenediamine and methyl sulphate (Wedekind and Meyer), 1909, A., i, 187.

$C_{20}H_{31}O_4N_3$, and its benzoyl derivative, from terpinene nitrosite (Wallach and Boedecker), 1907, A., i, 65.

$C_{20}H_{32}O_4N_2$, from methyl alcohol and the nitroso-compound from aminolauronic anhydride (Noyes and Taveau), 1904, A., i, 808.

$C_{20}H_{36}O_{19}N_{12}$, from glyoxal and carbamide (Behrend, Meyer, and Rusche), 1905, A., i, 419.

$C_{20}H_{12}O_6NBr$, from 2-(6-nitropiperonyl)-naphthaflavanone and bromine (Torrey and Cardarelli), 1911, A., i, 68.

$C_{20}H_{12}O_8N_4S_4$, from 3-cyano-2:4-diketo-5-benzylidenetetrahydrothiophen and barium hydroxide (Benary), 1910, A., i, 580.

$C_{20}H_{19}O_4N_7S$, $2H_2O$, from acetylguanamine acetate and orange II. (Radlberger), 1910, A., i, 761.

$C_{20}H_{23}O_2NI$, from the action of methyl iodide on the sodium derivative of 5-hydroxy-1-phenyl-4-methyltriazole (Dimroth and Letsche), 1905, A., i, 100.

$C_{20}H_{25}O_3NS$, from ψ-codeinone and ethyl mercaptan (Pschorr and Krech), 1910, A., i, 423.

$C_{20}H_{26}O_3NI$, from methyl iodide and a betaine from β-ethylthiocodide (Pschorr and Krech), 1910, A., i, 423.

$C_{21}H_{12}N_4$, and its trinitro-derivative, from the action of copper powder on indazole (Jacobson and Huber) 1908, A., i, 299.

**Substance,** $C_{21}H_{16}O_4$, from the hydrolysis of the triacetyl derivative of 3:6:3′:6′-tetrahydroxytriphenylmethane (Schorigin), 1907, A., i, 1032.

$C_{21}H_{20}O_2$, from condensation of salicylaldehyde and dipropyl ketone (Decker and v. Fellenberg), 1909, A., i, 117.

$C_{21}H_{20}O_4$, and $C_{21}H_{18}O_4Br_4$, from $C_{21}H_{24}O_4$ and its tetrabromo-derivative (Fabinyi and Széki), 1905, A., i, 591.

$C_{21}H_{22}O_3$, from 4:7-dimethylcoumarin (Fries and Klostermann), 1906, A., i, 276.

$C_{21}H_{24}O_4$, and its tetra-acyl and tetrabromo-derivatives, from catechol and acetone (Fabinyi and Széki), 1905, A., i, 591.

$C_{21}H_{24}O_6$, and its hexa-acyl and dibromo-derivatives, from pyrogallol and acetone (Fabinyi and Széki), 1905, A., i, 888.

$C_{21}H_{28}O_6$, and its methyl ether and anhydride, from 6-hydroxypentaketo-octamethyltetrahydrophenylphenylidenemethane (Herzig, Wenzel, and Reismann), 1906, A., i, 95.

$(C_{21}H_{30}O)_5$, from oil of clove stalks (Deussen and Loesche), 1909, A., i, 172.

$C_{21}H_{34}O_2$, and $C_{22}H_{36}O_2$, from *Scleroderma aurantium* (Bamberger and Landsiedl), 1907, A., ii, 45.

$C_{21}H_{14}O_3N_2$, from phthalimide and anthranilic acid (König), 1904, A., i, 297.

$C_{21}H_{16}ON_4$, from 4-keto-1:3-diphenylpyrazolone and *o*-phenylenediamine (Sachs and Becherescu), 1903, A., i, 529.

$C_{21}H_{16}O_2N_2$, from benzaldehydephenylhydrazone and ethyl acetoacetate (Minunni), 1906, A., i, 114.

$C_{21}H_{17}ON$, from 4-hydroxy-1:2:3-triphenyl-5-pyrrolidone (Borsche), 1909, A., i, 956.

$C_{21}H_{17}ON$, from decomposition of phenylnitromethane (Heim), 1911, A., i, 28.

$C_{21}H_{17}ON_5$, and $C_{21}H_{18}ON_5Cl$, from the action of phenylhydrazine on the lactone of dichloroacetylanthranilic acid (Gärtner), 1905, A., i, 130.

$C_{21}H_{17}N_3S_2$, from the action of thionyl chloride on thiobenzamide (Tochtermann), 1905, A., i, 596.

**Substance,** $C_{21}H_{18}OS$, from benzyl sulphoxide and benzaldehyde (Fromm and Achert), 1903, A., i, 341.

$C_{21}H_{18}N_4S$, from benzidine and dibenzyl cyanoiminodithiocarbonate (Fromm and v. Göncz), 1907, A., i, 873.

$C_{21}H_{19}O_2N_3$, from *p*-nitrosotoluene and sodium hydroxide (Reissert), 1909, A., i, 436.

$C_{21}H_{19}O_8N$, from the substance, $C_{13}H_{14}O_4NI$ (Ortoleva and Vassallo), 1904, A., i, 645.

$C_{21}H_{20}ON_2$, from ethyl 1-methyl-3-cyclohexanone-4-oxalate and aniline (Kötz and Hesse), 1906, A., i, 88.

$C_{21}H_{21}O_6N_3$, from brucine and nitric acid (Leuchs and Anderson), 1911, A., i, 746.

$C_{21}H_{22}ON_4$, and its additive salts, from the action of magnesium phenyl bromide on 8-methylcaffeine (Schulze), 1907, A., i, 546.

$C_{21}H_{22}O_2N_2$, from indigotin and magnesium isoamyl bromide (Sachs and Kantorowicz), 1909, A., i, 425.

$C_{21}H_{24}O_6N_2$, from brucinolic acid and sodium hydroxide (Leuchs and Weber), 1909, A., i, 954; (Leuchs and Peirce), 1912, A., i, 899.

$C_{21}H_{27}O_2NS$, betaine of substance from β-ethylthiocodide (Pschorr and Krech), 1910, A., i, 422.

$C_{21}H_{29}O_2NS$, from β-ethylthiocodide (Pschorr and Krech), 1910, A., i, 422.

$C_{21}H_{29}O_2NS_2$, from β-methylthiocodide and ethyl mercaptan (Pschorr and Krech), 1910, A., i, 422.

$C_{21}H_{12}O_{19}S_3Na_3As$, from trisodium arsenate and sulphosalicylic acid (Barthe), 1910, A., i, 262.

$C_{21}H_{21}O_4N_2ClHg_2$, from dinitrophenylpyridinium chloride and *p*-aminophenyl mercuriacetate (Reitzenstein and Stamm), 1910, A., i, 348.

$C_{21}H_{28}O_2NIS$, from methyl iodide and β-ethylthiocodide, and its derivatives (Pschorr and Krech), 1910, A., i, 422.

$C_{22}H_{15}N_3$, from diazotriphenylpyrrole and sulphuric acid, and its ethyl derivative (Goldschmiedt), 1909, A., i, 122.

$C_{22}H_{16}O$, from the distillation of the compound, $C_{23}H_{16}O_3$ (Breslauer and Pictet), 1907, A., i, 915.

**Substance**, $C_{22}H_{18}O$, from *αβγγ*-tetraphenylbutyrolactone (Reimer and Reynolds), 1908, A., i, 989.

$C_{22}H_{18}O_4$, from the reduction of 2:4(or 2:6)-dihydroxydeoxybenzoin (Finzi), 1905, A., i, 907.

$C_{22}H_{18}O_5$, from cyclohexanone and phthalaldehydic acid (Morgenstern), 1909, A., i, 804.

$C_{22}H_{18}O_5$, from the condensation of phenanthraquinone with ethyl acetoacetate (Richards), 1910, T., 1460; P., 195.

$C_{22}H_{18}N_4$, from 2:4:5-triphenylguanylamidide and acetic anhydride (Ley and Müller), 1907, A., i, 730.

$C_{22}H_{22}O_3$, from condensation of methyl ethyl ketone and salicylaldehyde (Decker and v. Fellenberg), 1909, A., i, 116.

$C_{22}H_{22}O_6$, from *p*-benzoquinone and methyl *p*-aminobenzoate (Siegmund), 1910, A., i, 749.

$C_{22}H_{24}O_2$, from 4:7-dimethylcoumarin, and its bromine derivative (Fries and Volk), 1911, A., i, 205.

$C_{22}H_{24}O_2$, from 1-[2:5-dimethylhydrocoumarilyl]-2:5-dimethylhydrocoumarone (Fries and Klostermann), 1908, A., i, 822.

$C_{22}H_{26}O$, from the oxidation of dimethylstyrylcarbinol (Kohler and Heritage), 1905, A., i, 207.

$C_{22}H_{26}O_5$, from dimethylphloroglucinolaldehyde, potassium hydroxide, and methyl iodide (Herzig, Wenzel, and Reismann), 1906, A., i, 95.

$C_{22}H_{26}N$, from oxidation of tetramethyldiaminodiphenylcyclohexylidenemethane (Lemoult), 1912, A., i, 791.

$C_{22}H_{30}O_9$, from *Simaruba amara* (Gilling), 1908, A., ii, 527.

$C_{22}H_{40}O_6$, from acid from ricinoleic acid (Chonowsky), 1909, A., i, 761.

$C_{22}H_{42}O_4$, from the condensation product of methane and ethylene and oxygen (Losanitsch), 1908, A., ii, 33.

$C_{22}H_{14}N_2S$, from diketone, $C_{22}H_{14}O_2N_2$ (Angelico), 1911, A., i, 1033.

$C_{22}H_{15}O_4N$, from *ω*-amino-*op*-dihydroxyacetophenone (Tutin), 1910, T., 2515.

$C_{22}H_{16}O_2N_2$, from indigotin and magnesium phenyl bromide, and its sulphate and diethyl derivative (Sachs and Kantorowicz), 1909, A., i, 425.

**Substance**, $C_{22}H_{17}O_2N$, from triphenylcarbinol and cyanoacetic acid (Fosse), 1906, A., i, 976.

$C_{22}H_{18}O_4N_2$, from oxidation of substance, $C_{22}H_{16}O_2N_2$, from indigotin and magnesium phenyl bromide (Sachs and Kantorowicz), 1909, A., i, 425.

$C_{22}H_{18}O_7N_4$, from prune and *m*-nitroaniline (Grandmougin and Bodmer), 1907, A., i, 356.

$C_{22}H_{19}O_2N$, from benzoflavol (Dunstan and Cleaverley), 1907, T., 1624; P., 206.

$C_{22}H_{21}O_{13}N$, from ethyl phloroglucinoldicarboxylate and nitric acid (Leuchs and Geserick), 1909, A., i, 107.

$C_{22}H_{23}O_{11}N_3$, from *αγ*-dimethyl *ββ*-diethyl *αγ*-dicyanopropane-*αββγ*-tetracarboxylate (Schmitt), 1907, A., i, 1007.

$C_{22}H_{24}O_5N_2$, isomeric, and their bromo-derivatives, from ethyl acetoacetate and phenylhydroxylamine (Scheiber and Wolf), 1907, A., i, 1028.

$C_{22}H_{25}ON_3$, from quinoline and hydroxylamine (Kaufmann and Strübin), 1911, A., i, 321.

$C_{22}H_{25}O_2N$, from dimethylketen and benzylidenebenzylamine (Staudinger, Klever, and Kober), 1910, A., i, 588.

$C_{22}H_{25}O_3N$, from oxidation of *β*-isobutyrylbenzylamino-*β*-phenyl-*αα*-dimethylpropionic acid (Staudinger, Klever, and Kober), 1910, A., i, 587.

$C_{22}H_{28}N_2S$, from carvone hydrosulphide and hydrogen cyanide (Steele), 1911, P., 240.

$C_{22}H_{30}O_4S$, from hydrolysis of the compound of hydrogen cyanide and carvone hydrosulphide (Steele), 1911, P., 241.

$C_{22}H_{31}O_{18}N$, acetyl derivative of the product from nitration of cellulose (Crane and Joyce), 1910, A., i, 364.

$C_{22}H_{36}O_4N_2$, from ethyl alcohol and the nitroso-compound from aminolauronic anhydride (Noyes and Taveau), 1904, A., i, 807.

$C_{22}H_{21}O_5N_2Cl$, from isoquinoline and chloroacetic acid (Ihlder), 1903, A., i, 116.

$C_{22}H_{19}O_3N_4SNa$, from 1-amino-2-naphthol-4-sulphonic acid, phenylhydrazine and sodium hydrogen sulphite (Bucherer and Sonnenburg), 1910, A., i, 145.

**Substance**, $C_{22}H_{21}O_8NS_2$, from new-magenta-disulphone (Schmidlin), 1907, A., i, 94.

$C_{23}H_{16}O_3$, from the action of formaldehyde on *α*-naphthol (Breslauer and Pictet), 1907, A., i, 915.

$C_{23}H_{18}O_2$, from reduction of benzylidenedeoxybenzoin (Thiele and Ruggli), 1912, A., i, 867.

$C_{23}H_{19}O_2$, or $C_{23}H_{20}O_2$, from the action of magnesium *o*-tolyl bromide on xanthone (Decker, v. Fellenberg, and Dinner), 1907, A., i, 1065.

$C_{23}H_{20}O_3$, from reduction of benzylidenedeoxybenzoin (Thiele and Ruggli), 1912, A., i, 867.

$C_{23}H_{20}O_3$, from methyl cinnamate, magnesium phenyl bromide, and benzoyl chloride (Kohler and Heritage), 1905, A., i, 207.

$C_{23}H_{20}O_{10}$, and its acetyl derivative, from the potassium derivative of rhein (Oesterle and Riat), 1910, A., i, 126.

$C_{23}H_{22}O_3$, from cinnamylideneacetophenone and ethyl acetoacetate (Vorländer and Staudinger), 1906, A., i, 366.

$C_{23}H_{22}N_2$, from the action of light on quinaldine and acetone, and its salts (Ciamician and Silber), 1911, A., i, 647.

$C_{23}H_{26}O_2$, from the dehydration of diphenylcamphorylcarbinol (Haller and Bauer), 1906, A., i, 441.

$C_{23}H_{28}O_2$, from *α*-bromocamphor, magnesium, and benzophenone (Malmgren), 1903, A., i, 103.

$C_{23}H_{32}O_2$, from benzophenone and isoamyl ether (Paternò and Chieffi), 1911, A., i, 66.

$C_{23}H_{32}N_2$, from dimethylaniline and hexahydrobenzaldehyde (Zelinsky and Gutt), 1907, A., i, 709.

$C_{23}H_{14}O_7N_2$, from 3:5-dinitro-4-hydroxybenzoic acid and pyrene (Morgenstern), 1910, A., i, 482.

$C_{23}H_{15}ON_3$, from 3-amino-2-methyl-4-quinazolone and benzil (Bogert and Beal), 1912, A., i, 395.

$C_{23}H_{18}ON_2$, from benzophenone and 1-phenyl-3-methyl-5-pyrazolone (Heiduschka and Rothacker), 1912, A., i, 52.

$C_{23}H_{18}O_2N_2$, from indigotin and magnesium benzyl chloride or magnesium *p*-tolyl bromide (Sachs and Kantorowicz), 1909, A., i, 425.

**Substance**, $C_{23}H_{19}O_7N_3$, from prune and *m*-aminobenzoic acid (Grandmougin and Bodmer), 1907, A., i, 356.

$C_{23}H_{20}ON_4$, from the monophenylhydrazone of *o*-methoxyphenyltriketobutane and phenylenediamine (Sachs and Herold), 1907, A., i, 629.

$C_{23}H_{23}O_3N$, from benzylidenebenzoylacetone and ethyl *β*-aminocrotonate (Knoevenagel, Erler, and Reinecke), 1903, A., i, 652.

$C_{23}H_{24}O_4N_2$, from phenylhydrazine and ethyl 3-phenyl-1-methylcyclohexene-5-one-2:4-dicarboxylate (Knoevenagel and Heeren), 1903, A., i, 660.

$C_{23}H_{30}N_3Br$, and its platinichloride, from the action of cyanogen bromide on 1-phenylpiperidine (v. Braun), 1907, A., i, 960.

$C_{23}H_{33}O_7N$, from delphocurarine (Heyl), 1903, A., i, 650.

$C_{23}H_{36}O_2Br_2$, from the action of bromine on lactucol (Sperling), 1904, A., i, 607.

$C_{23}H_{16}O_6N_4S_4$, from the action of benzoyl chloride on sodium hyposulphite in presence of pyridine (Binz and Marx), 1907, A., i, 923.

$C_{23}H_{19}O_2NS$, phenacyl derivative of $C_{15}H_{13}ONS$ (Kelber), 1910, A., i, 391.

$C_{23}H_{23}ON_5S$, from $C_{15}H_{14}N_3SCl$ (Busch and Schneider), 1903, A., i, 534.

$C_{23}H_{27}O_4N_2Br$, from brucine (Mossler), 1910, A., i, 275.

$C_{23}H_{30}O_4NNa$, from sodium bornyloxide and *p*-ethoxyphenylcitraconimide (Piutti), 1907, A., i, 313.

$C_{24}H_{26}$, from action of silent electric discharge on benzene (Losanitsch), 1910, A., i, 2.

$C_{24}H_{14}O_3$, from naphthaldehydic acid and acenaphthenone (Wiechowski), 1905, A., i, 709.

$C_{24}H_{14}O_4$, from acenaphthenequinone, and its derivatives (Kalle & Co.), 1910, A., i, 752.

$C_{24}H_{16}O_3$, from reduction of 5:12-dihydroxy-11-phenonaphthacenequinone, and its acetyl derivative (Voswinckel and de Weerth), 1910, A., i, 50.

$C_{24}H_{18}O_5$, from action of alkali on 6-acetoxy-6:11:(?′)-trihydroxy-11-phenyldihydronaphthacenequinone, and its acetyl derivative (Voswinckel), 1909, A., i, 167.

**Substance**, $C_{24}H_{18}N_4$, and its hydrochloride and polymeride, from the oxidation of azurine (Willstätter and Moore), 1907, A., i, 642.

$C_{24}H_{20}O_3$, and its isomeride, from phenoxyacetone, benzaldehyde, and anisaldehyde (Stoermer and Welhn), 1903, A., i, 41.

$C_{24}H_{20}O_{10}$, tetra-acetyl derivative of $C_{16}H_{14}O_6$ obtained in the preparation of chloroacetocatechol (Voswinckel), 1910, A., i, 43.

$C_{24}H_{20}N_6$, from methylaniline-ω-sulphonic acid and methyl-*o*-toluidine-ω-sulphonic acid (Aktien-Gesellschaft für Anilin-Fabrikation), 1909, A., i, 373.

$C_{24}H_{22}O$, and its oxime and bromo-derivative, from the action of glacial acetic and sulphuric acids on β-benzyl-β-styrylpropiophenone (Bauer and Breit), 1906, A., i, 517.

$C_{24}H_{30}O_4$, and its tetra-acetyl derivative, from catechol and methyl ethyl ketone (Fabinyi and Széki), 1905, A., i, 591.

$C_{24}H_{30}O_6$, and its hexa-acetyl derivative, from pyrogallol and methyl ethyl ketone (Fabinyi and Széki), 1905, A., i, 889.

$C_{24}H_{32}O_4$, from oxidation of elateric acid (Moore), 1910, T., 1804; P., 215.

$C_{24}H_{32}O_6$, from acenaphthenequinone and ethyl acetoacetate (Recchi), 1903, A., i, 261.

$C_{24}H_{42}O_5$, from hydrolysis and reduction of sodium taurocholate (Piettre), 1909, A., i, 586.

$C_{24}H_{44}O$, from β-chiclalban (Tschirch and Schereschewski), 1905, A., i, 685.

$C_{24}H_{44}O_2$, from the absorption of oxygen by the condensation product of ethylene (Losanitsch), 1908, A., i, 846; ii, 33.

$C_{24}HO_8Cl_{13}$, from the action of toluene on tetrachloro-*o*-benzoquinone (Jackson and MacLaurin), 1907, A., i, 857.

$C_{24}H_{14}O_4S_2$, from thiophenoquinone and alcohol (Posner), 1904, A., i, 1030.

$C_{24}H_{16}O_4N_2$, from anthranoylanthranilic-*O*-anhydride and 1:2-naphthaquinone-4-sulphonic acid (Schroeter and Eisler), 1909, A., i, 577.

$C_{24}H_{17}ON_3$, and its leuco-base, from the oxidation of the substance, $C_{24}H_{19}ON$ (Willstätter and Moore), 1907, A., i, 643.

**Substance**, $C_{24}H_{17}ON_3$, and its polymeride and leuco-base, from the oxidation of azurine (Willstätter and Moore), 1907, A., i, 643.

$C_{24}H_{18}ON_2$, from the reduction of *o*-nitrobenzyl chloride in presence of 2:7-dihydroxynaphthalene (Baezner, Gueorguieff, and Gardiol), 1906, A., i, 902.

$C_{24}H_{19}ON_3$, from the oxidation of a mixture of *p*-amino- and *p*-hydroxydiphenylamine (Willstätter and Moore), 1907, A., i, 643.

$C_{24}H_{20}O_2N_2$, from diphenylamine and hydrogen peroxide (Uschakoff), 1906, A., i, 159.

$C_{24}H_{20}O_4N_2$, from condensation of 3-keto-2-*p*-dimethylaminoanilcoumaran and 2-coumaranone (Fries and Hasselbach), 1911, A., i, 151.

$C_{24}H_{21}OBr$, from the action of glacial acetic and sulphuric acids on β-benzyl-β-styryl-*p*-bromopropiophenone (Bauer and Breit), 1906, A., i, 518.

$C_{24}H_{22}O_5N_3$, from indigo-brown (Perkin and Bloxam), 1907, T., 284; P., 30.

$C_{24}H_{24}ON_2$, from tetramethyldiaminotriphenylmethane-*o*-carboxylic acid (Guyot and Haller), 1910, A., i, 286.

$C_{24}H_{25}ON_3$, from isatin and dimethylaniline (Haller and Guyot), 1907, A., i, 566.

$C_{24}H_{25}O_4N$, and its acetyl derivative, from *o*-methoxybenzaldehyde and glycine (Erlenmeyer and Bade), 1905, A., i, 131.

$C_{24}H_{25}N_6Cl$, from 2:4-dimethylpyrrole (Marchlewski and Robel), 1910, A., i, 206.

$C_{24}H_{26}O_5N_2$, from the reduction of xanthoxalo-*m*-xylidil (Ruhemann), 1906, T., 1852; P., 284.

$C_{24}H_{27}O_8N_5$, from brucinonic acid semicarbazone and sodium amalgam (Leuchs and Weber), 1909, A., i, 254.

$C_{24}H_{30}O_4N_2$, from the action of ethyl pyruvate on *p*-toluidine (Simon), 1908, A., i, 739.

$C_{24}H_{30}O_5N_2$, and $C_{24}H_{30}O_6N_2$, and its isomeride, from biscamphoformeneaminecarboxylic acid (Tingle and Robinson), 1906, A., i, 903.

$C_{24}H_{30}O_{12}Cl_4$ (two), from ester, $C_{30}H_{42}O_{16}$ (Guthzeit and Hartmann), 1910, A., i, 388, 389.

**Substance**, $C_{24}H_{30}O_{12}Br_4$, from ester, $C_{30}H_{42}O_{16}$ (Guthzeit and Hartmann), 1910, A., i, 388.

$C_{24}H_{31}O_6Br$, from dibromoasarone (Thoms and Beckstroem), 1904, A., i, 409.

$C_{24}H_{34}O_2N_2$, from quinine-β-ethiodide and Grignard's reagent (Freund and Meyer), 1910, A., i, 132.

$C_{24}H_{38}O_4N_2$, from ethyl 1-methylcyclohexan-3-one-4-carboxylate and piperazine (Kötz and Merkel), 1909, A., i, 158.

$C_{24}H_{10}ON_2Br_2$, from 4-bromoacenaphthaquinone (Graebe and Guinsbourg), 1903, A., i, 408.

$C_{24}H_{26}O_4N_3S_2$, from dinitrodiphenyl disulphide (Fromm and Wittmann), 1908, A., i, 632.

$C_{24}H_{28}O_7N_{12}S_2$, from biguanide sulphate and crystal ponceau (Radlberger), 1910, A., i, 760.

$C_{25}H_{20}O_3$, from ethyl phenylpropiolate, acetophenone, and sodium ethoxide (Ruhemann), 1908, T., 435 ; P., 52.

$C_{25}H_{20}O_6$, from the action of phenylpropiolyl chloride on ethyl sodiomalonate (Ruhemann and Merriman), 1905, T., 1395 ; P., 225.

$C_{25}H_{24}O_2$, from the action of glacial acetic and sulphuric acids on β-benzyl-β-styrylpropiophenone (Bauer and Breit), 1906, A., i, 518.

$C_{25}H_{32}O_{10}$, from ethyl acetonedicarboxylate and benzylidene-ethylamine (Petrenko-Kritschenko and Hirschberg), 1909, A., i, 960.

$C_{25}H_{19}N_4Cl$, from safranine and benzaldehyde (Balls, Hewitt, and Newman), 1912, T., 1848.

$C_{25}H_{24}O_4N_2$, from 3:6-diacetylamino-9-phenylxanthonium chloride (Kehrmann and Dengler), 1910, A., i, 406.

$C_{25}H_{25}O_5N$, from ethyl oxalacetate and benzylidene-β-naphthylamine (Simon and Mauguin), 1908, A., i, 296.

$C_{25}H_{27}O_3N_9$, from the action of *p*-triazobenzaldehyde on camphoryl-ψ-semicarbazide (Forster and Judd), 1910, T., 261.

$C_{25}H_{32}O_2N_4$, from acetylacetone and diphenylmethanedimethyldihydrazine (v. Braun), 1910, A., i, 524.

$C_{25}H_{15}O_4N_2Cl$, benzoyl derivative of a red acid from methyl 5-chloroanthranilate and nitrosobenzene (Freundler), 1910, A., i, 446.

**Substance**, $C_{25}H_{19}ON_4Cl$, from safranine and *p*-hydroxybenzaldehyde (Balls, Hewitt, and Newman), 1912, T., 1848.

$C_{25}H_{27}O_8NS$, from 2:7-dihydroxynaphthylene-1:8-difurfurylideneimine and methyl sulphate, and its salts with acids (Beschke, Rölle, and Strum), 1909, A., i, 963.

$C_{25}H_{28}O_4N_4S_2$, from rongalite, aniline hydrochloride, and formaldehyde (Binz and Isaac), 1908, A., i, 941.

$C_{25}H_{22}O_6N_5ClHg_2$, from dinitrophenylpyridinium chloride and *p*-aminophenyl mercuriacetate (Reitzenstein and Stamm), 1910, A., i, 348.

$C_{25}H_{22}O_6N_5ClHg_2$, from *o*-aminophenylmercuric acetate and dinitrophenylpyridinium chloride (Reitzenstein and Bonitsch), 1912, A., i, 740.

$C_{26}H_{18}O_2$, from diphenylnaphthylallenecarboxylic acid and acetic acid (Lapworth and Wechsler), 1910, T., 47.

$C_{26}H_{44}O_2$, from action of silent electric discharge on ethylene (Losanitsch), 1910, A., i, 1.

$C_{26}H_{46}O$, from cholesterol, perhydrol, and sulphuric acid, and its derivatives (Minovici and Vlahutza), 1912, A., i, 697.

$C_{26}H_{13}O_4N$, from anthraquinone-2:3-dicarboxylic anhydride, quinaldine and zinc chloride (Willgerodt and Maffezzoli), 1910, A., i, 679.

$C_{26}H_{14}O_3N_2$, from 4-nitro-9-hydroxyfluorene-9-carboxylic acid (Schmidt and Bauer), 1906, A., i, 26.

$C_{26}H_{16}O_{15}N_4$, from 3:5-dinitro-4-hydroxybenzoic acid and diphenylene oxide (Morgenstern), 1910, A., i, 482.

$C_{26}H_{18}O_4S_2$, from dibenzylthioltetrahydroquinone (Posner and Lipski), 1904, A., i, 1031.

$C_{26}H_{20}O_4N_6$, from nitrosobenzaldehyde-*p*-nitrophenylhydrazone (Bamberger and Pemsel), 1903, A., i, 285.

$C_{26}H_{20}O_4N_6$ (three), from the action of amyl nitrite on phenyl-*m*-nitro benzylidenehydrazine (Bamberger and Pemsel), 1903, A., i, 285.

$C_{26}H_{20}N_2S$, from benzanilidimide chloride and thiobenzanilide (Jamieson), 1904, A., i, 397.

**Substance**, $C_{26}H_{22}O_3N$, from benzyl cyanide, sodium methoxide, and ethyl cinnamate (Avery and McDole), 1908, A., i, 344.

$C_{26}H_{22}O_3N_4$, from interaction of α-nitroso-β-naphthol, methylamine hydrochloride and formaldehyde (Lange), 1911, A., i, 505.

$C_{26}H_{24}ON_4$, and its additive salts, from the action of magnesium phenyl bromide on methoxy- or ethoxy-caffeine (Schulze), 1907, A., i, 546.

$C_{26}H_{26}ON_2$, from the action of phenylhydrazine on β-phenyl-α-tert.-butyl-β-benzoylpropionic acid (Japp and Maitland), 1904, T., 1500.

$C_{26}H_{26}O_2N_2$, from acetone and naphthylhydroxylamine (Beckmann and Scheiber), 1907, A., i, 829.

$C_{26}H_{28}O_2N_4$, from ethyl benzoylacetonylacetate and phenylhydrazine (Borsche and Fels), 1906, A., i, 510.

$C_{26}H_{28}O_3N_2$, from quinoline methiodide and ethyl acetoacetate (Kaufmann), 1912, A., i, 1017.

$C_{26}H_{34}N_3Br$, from the action of cyanogen bromide on 1-*p*-tolylpiperidine (v. Braun), 1907, A., i, 960.

$C_{26}H_{40}O_4N_2$, from reduction of dioscorine, and its aurichloride (Gorter), 1911, A., i, 562.

$C_{26}H_{41}O_{10}N_3$, and its copper salt, from the condensation of aspartic acid and aminopinenedicarboxylic acid (Godden), 1908, T., 1173.

$C_{27}H_{20}O_8$, from 2-benzoyl-3:4-dimethoxybenzoic acid (Faltis), 1910, A., i, 698.

$C_{27}H_{22}O_3$, from the action of light on benzophenone and benzaldehyde (Ciamician and Silber), 1911, A., i, 647.

$C_{27}H_{36}O_4$, from catechol and diethyl ketone (Fabinyi and Széki), 1905, A., i, 592.

$C_{27}H_{42}O_3$, and $C_{27}H_{46}O_3$, and its diacetate and dipropionate, from the oxidation of cholesterol (Windaus), 1907, A., i, 212.

$C_{27}H_{46}O$, from the root of *Morinda longiflora* (Barrowcliff and Tutin), 1907, T., 1915; P., 249.

$C_{27}H_{46}O_3$, and its acyl derivatives, from the oxidation of cholesterol (Pickard and Yates), 1908, T., 1680; P., 121.

$C_{27}H_{18}O_{14}N_4$, from 3:5-dinitro-4-hydroxybenzoic acid and fluorene (Morgenstern), 1910, A., i, 482.

**Substance**, $C_{27}H_{22}N_2S$, from benzanilidimide chloride and thiobenzo-*p*-toluidide (Jamieson), 1904, A., i, 397.

$C_{27}H_{23}O_2N$, from benzylidenebenzoylacetone and benzoylacetoneamine (Knoevenagel, Erler, and Reinecke), 1903, A., i, 652.

$C_{27}H_{32}O_6N_4S_2$, from rongalite and aniline hydrochloride (Binz and Isaac), 1908, A., i, 941.

$C_{28}H_{34}$, from action of silent electric discharge on benzene and hydrogen (Losanitsch), 1910, A., i, 2.

$C_{28}H_{14}O_6$, from erythrohydroxyanthraquinone (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 678.

$C_{28}H_{16}O_2$, from anthraquinone (Kinzlberger & Co.), 1910, A., i, 752.

$C_{28}H_{16}O_3$, from diphenyleneketen (Staudinger), 1906, A., i, 861.

$C_{28}H_{30}O_4$, from 3:5-dihydroxytritanolactone (v. Liebig), 1905, A., i, 782.

$C_{28}H_{38}O_{19}$, from β-bromoacetodextrose (Fischer and Delbrück), 1909, A., i, 633.

$C_{28}H_{12}O_{10}Cl_{12}$, from the action of ethyl alcohol on tetrachloro-*o*-benzoquinone (Jackson and MacLaurin), 1907, A., i, 857.

$C_{28}H_{16}O_2N_2$, from indanthren (Kaufler), 1903, A., i, 446.

$C_{28}H_{18}O_{14}N_4$, from 3:5-dinitro-4-hydroxybenzoic acid and phenanthrene (Morgenstern), 1910, A., i, 483.

$C_{28}H_{20}O_3N_2$, from 3-phenylpyrazoisocoumarazone and phenol (Michaelis and Leo), 1910, A., i, 516.

$C_{28}H_{26}O_4N_8$, from dinitrophenyldipyridinium chloride and phenylhydrazine (Zincke and Weisspfenning), 1912, A., i, 302.

$C_{28}H_{28}O_5N_4$, from oxidation of dianisidine (Reitzenstein), 1910, A., i, 703.

$C_{28}H_{38}O_5N_2$ (or $C_{28}H_{40}O_6N_2$), from elateric acid (v. Hemmelmayr), 1907, A., i, 230.

$C_{28}H_{24}O_6N_6S_2Na_2$, from 1-benzeneazo-2-naphthol-6-sulphuric acid, phenylhydrazine and sodium hydrogen sulphite (Bucherer and Sonnenburg), 1910, A., i, 146.

$C_{29}H_{16}N_4$, and $C_{34}H_{21}N_3$, from flavinduline (Sachs and Bargellini), 1905, A., i, 488.

$C_{29}H_{27}O_3$, from the reduction of *p*-hydroxydeoxybenzoin (Weisl), 1905, A., i, 905.

**Substance**, $C_{39}H_{30}N_2$, from the action of aniline on phenylchloromethylenecamphor (Forster), 1903, T., 105.

$C_{29}H_{45}O_2$, from the fat of *Beta vulgaris* (Neville), 1912, T., 1103; P., 130.

$C_{29}H_{31}O_6NS$, from methyl sulphate and 2:7-dihydroxynaphthylene-1:8-dibenzylideneimine (Beschke, Rölle, and Strum), 1909, A., i, 962.

$C_{29}H_{29}ON_4ClHg$, from 3″-amino-4:4′-tetramethyldiaminotriphenylmethane and *o*-hydroxyphenylmercuric chloride (Reitzenstein and Bonitsch), 1912, A., i, 740.

$C_{30}H_{20}O_4$, from 2:3-dimethoxyanthracene (Lagodzinski), 1906, A., i, 82.

$C_{30}H_{28}O_4$, from the methylation of benzoin by Fischer's method (Irvine and Weir), 1907, T., 1392.

$C_{30}H_{42}O_{16}$, from two dicarboxyglutaconic ester radicles (Guthzeit and Hartmann), 1907, A., i, 1007.

$C_{30}H_{50}O$, and its acetate from the latex from Euphorbia (Cohen), 1908, A., i, 884.

$C_{30}H_{22}O_4N_2$, from phthalyldibenzoylmethane and phenylhydrazine (Scheiber), 1912, A., i, 561.

$C_{30}H_{22}N_4S_5$, from dehydrodithiomalonanilide sulphide (Reissert and Moré), 1906, A., i, 827.

$C_{30}H_{24}O_4N_2$, from deoxybenzoincarboxylic acid and hydrazine (Wölbling), 1906, A., i, 49.

$C_{30}H_{25}O_{30}N_3$, from the action of fuming nitric acid on the substance, $C_{30}H_{26}$ (Jovitschitsch), 1908, A., i, 118.

$C_{30}H_{26}O_4S$, and $C_{30}H_{28}O_3S$, from thioduplobenzylideneacetophenone (Fromm and Lambrecht), 1908, A., i, 990.

$C_{30}H_{30}ON_2$, from benzil and dimethylaniline (Haller and Guyot), 1907, A., i, 565.

$C_{30}H_{30}O_2N_2$, from tetramethyldiaminophenyloxanthranol and benzene, and its salts, and compounds with hydroxylamine and phenylhydrazine (Haller and Guyot), 1904, A., i, 83.

$C_{30}H_{40}O_{16}Br_2$, from ester, $C_{30}H_{42}O_{16}$ (Guthzeit and Hartmann), 1910, A., i, 388.

$C_{30}H_{42}O_9N_8$, from hexamethylenetetramine and pyrogallol (Grishkewitsch-Trochimowsky), 1910, A., i, 108.

**Substance**, $C_{30}H_{44}O_{10}N_2$, from reduction of myristicinylideneaminoacetal (Salway), 1909, T., 1212.

$C_{30}H_{52}O_5Cr$, from maalyl alcohol and chromic anhydride (Schimmel & Co.), 1909, A., i, 114.

$C_{30}H_{25}OBr_3S$, from the action of bromine on thioduplobenzylideneacetophenone (Fromm and Lambrecht), 1908, A., i, 990.

$C_{30}H_{31}O_6N_3S_3$, from the reduction of dibenzyldiethylthioninedisulphonic acid (Gnehm and Schönholzer), 1908, A., i, 113.

$C_{30}H_{42}O_3I_2Hg_4$, from camphor and $K_2HgI_4$ (Marsh and Struthers), 1909, T., 1781.

$C_{31}H_{27}N$, and its nitroso-derivative, from alcoholic ammonia and dibenzylidenecyclopentanone (Mentzel), 1903, A., i, 497.

$C_{31}H_{28}O_3$, from methyl cinnamate and magnesium phenyl bromide (Kohler and Heritage), 1906, A., i, 97.

$C_{31}H_{32}O_3$, from the reduction of 4-hydroxy-3-methyldeoxybenzoin (Blau), 1905, A., i, 906.

$C_{31}H_{32}N_4$, from benzaldehyde and diphenylmethanediethyldihydrazine (v. Braun), 1910, A., i, 525.

$C_{31}H_{44}O$ (or $C_{33}H_{48}O_2$), from the latex from Euphorbia (Cohen), 1908, A., i, 884.

$C_{31}H_{48}O_3$, from olive leaves (Power and Tutin), 1908, T., 898; P., 117.

$C_{31}H_{50}O_3$, and $C_{33}H_{50}O_3$, from lupeol acetate (Cohen), 1907, A., i, 211.

$C_{31}H_{57}O$, from the reduction of geraniol (Enklaar), 1908, A., i, 664.

$C_{31}H_{58}O_2$, from the fat of *Beta vulgaris* (Neville), 1912, T., 1102; P., 130.

$C_{31}H_{21}O_2N_3$, $C_{31}H_{22}O_2N_2$, $C_{32}H_{24}O_3N_2$, and $C_{33}H_{26}O_4N_2$, from flavinduline (Sachs and Bargellini), 1905, A., i, 488.

$C_{31}H_{23}ON$, from *β*-benzoyl-*α*-phenylpropionitrile and benzylideneacetophenone (Hann and Lapworth), 1904, T., 1359; P., 183.

$C_{31}H_{23}O_2N$, from *β*-naphthol, benz aldehyde, and ammonia (Betti), 1903, A., i, 511.

$C_{31}H_{32}O_2N_2$, from tetramethyldiaminophenyloxanthranol and toluene, and its salts and compounds with hydroxylamine and phenylhydrazine (Haller and Guyot), 1904, A., i, 83.

$C_{31}H_{10}O_6N_2Br_2$, from 2:4-dibromo-1-aminoanthraquinone and oxalyl chloride (Lenhard), 1912, A., i, 998.

**Substance,** $C_{31}H_{35}O_8NS$, from 2:7-dihydroxy-1:8-di-*m*-hydroxybenzylideneimine and methyl sulphate (Beschke, Rölle, and Strum), 1909, A., i, 964.

$C_{31}H_{35}O_8NS$, from 2:7-dihydroxy-1:8-di-*o*- and -*p*-methoxybenzylideneimine and methyl sulphate, and chloride, and aurichloride of *p*-compound (Beschke, Rölle, and Strum), 1909, A., i, 963.

$C_{32}H_{14}O_4$, from β-methylanthraquinone (Badische Anilin- & Soda-Fabrik), 1908, A., i, 999.

$C_{32}H_{23}N_5$, from sodium benzeneazo-α-naphthyl sulphite (Voroschtsoff), 1911, A., i, 820.

$C_{32}H_{24}O_4$, from α-bromodiphenacyl (Paal and Schulze), 1903, A., i, 709.

$C_{32}H_{26}O$, from dehydrodypnopinacone and sodium amalgam (Delacre), 1912, A., i, 30.

$C_{32}H_{26}O_6$, from the reduction of γ-hydroxy-α-keto-βγ-diphenylbutyric acid (Erlenmeyer), 1905, A., i, 784.

$C_{32}H_{26}O_6$, from reduction of 3:4-dimethyleneoxychalkone (Bargellini and Bini), 1912, A., i, 118.

$C_{32}H_{30}O_4$, from reduction of 4-methoxychalkone (Bargellini and Bini), 1912, A., i, 118.

$C_{32}H_{51}N$ (or $C_{32}H_{53}N$), from cholestenone and piperidine (Windaus), 1906, A., i, 174.

$C_{32}H_{54}O_2$, from the oil of *Strychnos nux vomica* (Heiduschka and Wallenreuter), 1912, A., ii, 1087.

$C_{32}H_{20}O_5N_2$, from ethyl benzoylacetate and anthranilic acid (v. Niementowski), 1905, A., i, 612; 1906, A., i, 39.

$C_{32}H_{24}O_2N_2$, from fluorenone and *p*-phenylenediamine (Schlenk and Knorr), 1909, A., i, 808.

$C_{32}H_{26}O_{14}N_4$, from 3:5-dinitro-4-hydroxybenzoic acid and retene (Morgenstern), 1910, A., i, 482.

$C_{32}H_{30}ON_4$, from indigotin and dimethylaniline (Haller and Guyot), 1907, A., i, 565.

$C_{32}H_{30}ON_4$, from 3-phenylpyrazoisocoumarazone and dimethylaniline (Michaelis and Leo), 1910, A., i, 516.

$C_{32}H_{51}O_2Br$, from extract of *Apocynum androsaemifolium* and bromine (Moore), 1909, T., 742.

**Substance,** $C_{33}H_{22}O_7$, from acetic anhydride, sodium acetate, and phenanthraquinone (Scharwin), 1905, A., i, 448.

$C_{33}H_{26}N_2$, from the action of formaldehyde on phenyl-β-naphthylamine (Bucherer and Seyde), 1907, A., i, 345.

$C_{33}H_{27}N_5$, from desylanthranilic acid and phenylhydrazine (Weckowicz), 1908, A., i, 28.

$C_{33}H_{28}N_6$, formed as a by-product in the preparation of 2:4:5-triphenylguanylamidide (Ley and Müller), 1907, A., i, 730.

$C_{33}H_{33}O_5$, from asarylaldehyde and magnesium *o*-tolyl bromide (Széki), 1909, A., i, 920.

$C_{33}H_{27}O_6N_3$, from benzoylation of *m*-, and *p*-aminobenzoic acid in pyridine, and its salts (Heller and Tischner), 1910, A., i, 770.

$C_{33}H_{32}O_2N_4$, from benzoylacetone and diphenylmethanedimethyldihydrazine (v. Braun), 1910, A., i, 524.

$C_{33}H_{32}O_6N_4$, from formaldehyde and phenylglycine and its barium, copper, and acetyl derivatives (Gelmo and Suida), 1909, A., i, 382.

$C_{33}H_{36}O_2N_4$, from anisaldehyde and diphenylmethanediethyldihydrazine (v. Braun), 1910, A., i, 525.

$C_{33}H_{18}O_6Cl_3Br_2$, from iodine and the lead salt of 4-chloro-6-bromo-2:3-dihydroxy-1-methylnaphthalene (Fries and Empson), 1909, A., i, 809.

$C_{33}H_{28}O_6N_3Cl$, from isoquinoline and chloroacetic acid (Ihlder), 1903, A., i, 116.

$C_{34}H_{24}O_5$, from the oxidation of the lactone of diphenyl-2-hydroxy-9-phenylanthranolacetic acid (v. Liebig and Keim), 1908, A., i, 449.

$C_{34}H_{32}O_3$, from phenyl β-ethoxystyryl ketone (Reynolds), 1910, A., i, 858.

$C_{34}H_{34}O_2$, from reduction of distyryl ketone (Borsche), 1912, A., i, 194.

$C_{34}H_{38}O_7$, and its tribenzoyl derivative, from guaiaconic acid (Richter), 1906, A., i, 443.

$C_{34}H_{28}O_2N_6$, from benzoylphenylmethylpyrazolone and hydrazine hydrate (Michaelis and Bender), 1903, A., i, 289.

$C_{34}H_{38}O_4N_2$, from *p*-nitrobenzaldehyde and sodium camphor (Wootton), 1910, T., 411.

$C_{34}H_{38}O_5N_4$, isomeric with deoxyhæmatoporphyrin, from reduction of hæmatoporphyrin (Piloty), 1909, A., i, 540.

**Substance**, $C_{34}H_{31}O_8N_9S_2$, from biguanide sulphate and orange II (Radlberger), 1910, A., i, 760.

$C_{35}H_{27}N_3$, from chlorinated pyridine and β-naphthylamine (Reitzenstein and Breuning), 1911, A., i, 227.

$C_{35}H_{30}N_2$, from the action of formaldehyde on *p*-tolyl-α-naphthylamine (Bucherer and Seyde), 1907, A., i, 345.

$C_{35}H_{26}O_5N_2$, from the benzoylation of *syn*-benzylidenesalicylamide (Titherley), 1907, T., 1432.

$C_{35}H_{31}O_6N_3$, from benzoylation of *p*-aminophenylacetic acid in pyridine (Heller and Tischner), 1910, A., i, 770.

$C_{36}H_{30}O_2$, from benzylideneacetophenone and magnesium phenyl bromide (Kohler), 1903, A., i, 483.

$C_{36}H_{30}O_3$, from phenyl cinnamate and magnesium phenyl bromide (Kohler and Heritage), 1906, A., i, 96.

$C_{36}H_{34}ON_2$ (isomeric), from *o*-dibenzoylbenzene and dimethylaniline (Haller and Guyot), 1907, A., i, 565.

$C_{36}H_{34}O_{11}Cl_2$, from oxypeucedanin and hydrogen chloride (Herzog and Krohn), 1910, A., i, 125.

$C_{37}H_{29}N_3$, from aniline-blue (v. Baeyer and Villiger), 1904, A., i, 454.

$C_{38}H_{30}O_9$, from resorcinolbenzein and potassium hydroxide (v. Liebig), 1909, A., i, 98.

$C_{38}H_{32}O_2$, from action of acetic anhydride and sulphuric acid on αβ-dimethylanhydroacetonebenzil (Gray), 1909, T., 2134.

$C_{38}H_{36}O_2$, from the action of magnesium ethyl bromide on diphenylcyclohexanone (Kohler and Dover), 1907, A., i, 537.

$C_{38}H_{46}O_3$, from the reduction of cinnamylidenecamphor (Rupe and Frisell), 1905, A., i, 222.

$C_{38}H_{68}O$, from the oil of *Strychnos nux vomica* (Heiduschka and Wallenreuter), 1912, A., ii, 1087.

$C_{38}H_{28}O_2N_2$, from fluorenone and benzidine (Schlenk and Knorr), 1909, A., i, 808.

$C_{38}H_{34}O_4N_2$, from 2:7-dihydroxynaphthalene, benzaldehyde, and ammonia (Beschke, Rölle, and Strum), 1909, A., i, 962.

**Substance**, $C_{39}H_{22}O_4N_2$, from 2-aminoanthraquinone, naphthalene, and carbon tetrachloride (Badische Anilin- & Soda-Fabrik), 1912, A., i, 811.

$C_{40}H_{28}$, from diphenylketenquinoline and anthraquinone (Staudinger), 1908, A., i, 411.

$C_{40}H_{26}N_4$, from *o*-phenylenediamine and *oo*′-dibenzil (Zincke and Tropp), 1909, A., i, 36.

$C_{40}H_{30}O_7$, from 3:5-dihydroxytritanic acid (v. Liebig), 1905, A., i, 782.

$C_{40}H_{44}Br_{26}$, from lycopene (Willstätter and Escher), 1910, A., i, 331.

$C_{40}H_{50}O_5$, from the absorption of oxygen by the condensation product of acetylene (Losanitsch), 1908, A., ii, 32.

$C_{40}H_{56}O_{18}$, from the oxidation of xanthophyll (Willstätter and Mieg), 1907, A., i, 866.

$C_{40}H_{56}I_3$, from carrotene (Willstätter and Escher), 1910, A., i, 331.

$C_{40}H_{60}O_{20}$, from diethyl ester of acid $C_{19}H_{28}O_{10}$, from cholic acid, and metallic derivatives of (Letsche), 1909, A., i, 697.

$C_{40}H_{70}O_2$, from the oil of *Strychnos nux vomica* (Heiduschka and Wallenreuter), 1912, A., i, 1087.

$C_{40}H_{78}O$ (or $C_{40}H_{74}O$), from phytol (Willstätter and Hocheder), 1907, A., i, 786.

$C_{40}H_{28}O_3N_2$, from the action of aniline on *o*-benzoylbenzoic acid (Meyer), 1908, A., i, 25.

$C_{41}H_{32}O_8N_5$, from 3-amino-2-methyl-4-quinazolone, nitrous acid and α-naphthol and from β-naphthol (Bogert and Gortner), 1909, A., i, 679.

$C_{42}H_{36}O_2$, from methyl cinnamate and magnesium phenyl bromide (Kohler and Heritage), 1906, A., i, 97.

$C_{42}H_{38}O_2$, and its bromo-derivative, from diphenylstyrylcarbinol (Kohler), 1903, A., i, 483.

$C_{42}H_{38}O_5$, from the hydrolysis of methyl *o*-methoxytritanate (v. Liebig and Keim), 1908, A., i, 449.

$C_{43}H_{33}O_2N_3$, from the action of ethyl oxalacetate on benzylidene-β-naphthylamine (Simon and Mauguin), 1908, A., i, 296.

**Substance,** $C_{44}H_{27}O_3N_9$, from diketone $C_{22}H_{14}O_2N_2$ (ANGELICO), 1911, A., i, 1033.
  $C_{44}H_{30}O_3N_4$, from oxidation of oximinotriphenylpyrrole (ANGELICO and LABISI), 1910, A., i, 427.
  $C_{44}H_{36}O_9N_6$, from piperonal and 4-amino-1-phenyl-3-methyl-5-pyrazolone) (HEIDUSCHKA and ROTHACKER), 1912, A., i, 52.
  $C_{44}H_{42}O_6N_6$, from anisaldehyde and 4-amino-1-phenyl-3-methyl-5-pyrazolone (HEIDUSCHKA and ROTHACKER), 1912, A., i, 52.
  $C_{46}H_{34}N_4$, from bisanhydrophenacylamine (GABRIEL and LIECK), 1908, A., i, 465.
  $C_{46}H_{24}O_6N_{20}$, from *p*-benzoquinone and diaminostilbene (SIEGMUND), 1910, A., i, 749.
  $C_{47}H_{52}O_8N_5Br$, from brucine and cyanogen bromide (MOSSLER), 1910, A., i, 275.
  $C_{48}H_{42}N_6$, from the hydrolysis of anilinoacetal (WOHL and LANGE), 1908, A., i, 17.
  $C_{48}H_{46}O_8$, from the absorption of oxygen by the condensation product of acetylene (LOSANITSCH), 1908, A., ii, 33.
  $C_{48}H_{76}O_{10}$, from acid $C_{19}H_{28}O_{10}$, from cholic acid (LETSCHE), 1909, A., i, 698.
  $C_{48}H_{53}O_8N_5Cl_3Br$, from brucine and cyanogen bromide (MOSSLER), 1910, A., i, 275.
  $C_{50}H_{80}O_2$, from Pontianac resins (WEBER), 1904, A., i, 332.
  $C_{50}H_{70}O_5I_2Hg_6$, from interaction of camphor, and mercuric and potassium iodides (MARSH and STRUTHERS), 1909, T., 1787.
  $C_{52}H_{70}O_{35}$, from "bromoacetocellobiose" and silver carbonate (FISCHER and ZEMPLÉN), 1910, A., i, 718.
  $C_{52}H_{70}O_{35}$, from "bromoacetolactose" and silver carbonate (E. and H. FISCHER), 1910, A., i, 716.
  $C_{54}H_{50}O_5$, and its diacetate, from the oxidation of dicholesteryl ether (PICKARD and YATES), 1908, T., 1682; P., 121.
  $C_{54}H_{42}O_6N_2S_6$, and its tetra-acetyl derivative, from the action of hydroxylamine on 3:6-diphenylthiolquinone (POSNER), 1904, A., i, 1030.
  $C_{60}H_{49}O_2N_5$, from diphenylamine and hydrogen peroxide (USCHAKOFF), 1906, A., i, 159.
  $C_{60}H_{49}O_5N_3$, from aniline and benzilic acid (v. LIEBIG), 1908, A., i, 646.
**Substance,** $C_{63}H_{48}O_3N_3$, and $C_{63}H_{55}O_5N_3$, from *o*-toluidine and benzilic acid (v. LIEBIG), 1908, A., i, 646.
  $C_{66}H_{64}OBr_2$, from tribenzylcarbinol (SCHMERDA), 1909, A., i, 564.
  $C_{74}H_{72}O_5BrMg$, from α-naphthoyl chloride and magnesium α-naphthyl bromide (SCHMIDLIN and MASSINI), 1909, A., i, 563.
  $C_{78}H_{58}O_{16}$, from interaction of resorcinolbenzein and anhydroresorcinolbenzein (v. LIEBIG), 1909, A., i, 98.
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**Substitution,** law of, in aromatic compounds (FLÜRSCHEIM), 1903, A., i, 79; 1905, A., i, 614; 1907, A., i, 834, 835; (KAUFFMANN), 1903, A., ii, 401.
  in aromatic compounds, explanation of the (HOLLEMAN), 1906, A., i, 818.
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  influence of, in the nucleus on the rate of oxidation of the side-chain (COHEN and MILLER), 1904, T., 174, 1622; P., 11, 219; (COHEN and HODSMAN), 1907, T., 970; P., 152.
  influence of, on the formation of diazoamines and aminoazo-compounds (MORGAN and CLAYTON), 1906, T., 1054; P., 174; (MORGAN and MICKLETHWAIT), 1907, T., 360; P., 28.
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  of alkyloxy-groups in the benzene nucleus by hydrogen (Semmler), 1908, A., i, 557.
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  of halogens by hydroxyl (Senter), 1907, T., 460; P., 60.
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  of hydrogen for atoms or groups of atoms in aromatic compounds during reduction (Blanksma), 1905, A., i, 761.
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  of the hydroxyl of some carbinols by the group $\cdot CH_2\cdot CO_2H$ (Fosse), 1907, A., i, 136.
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**Succinaldehyde** derivatives (Harries and Krützfeld), 1906, A., i, 930.
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**Succinamic acid**, ethyl ester (Mol), 1908, A., i, 77.
**Succinanil, Succinanilic acid,** and **Succinanilide**, preparation of (Tingle and Cram), 1907, A., i, 692.
  and **Succinanilic acid**, sulphur derivatives, and their transformation product (Reissert and Moré), 1906, A., i, 827.
**Succinanil**, *m*-cyano- (Bogert and Beans), 1904, A., i, 585.
**Succinanilcarboxylic acid** (Riedel), 1912, A., i, 774.
**Succinanilic acid**, reaction of, with aniline (Tingle and Lovelace), 1907, A., i, 1044.
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  *p*-cyano-, and its derivatives (Bogert and Wise), 1912, A., i, 451.
**Succinanilide**, *tetra*chloro- (Verda), 1903, A., i, 21.
  *di*nitro- (Tingle and Burke), 1910, A., i, 21.
**Succindialdehyde**, molecular dispersion of (Harries), 1908, A., i, 317.
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**Succinein**, $C_{16}H_{14}O_6$, and its acetate, from succinic anhydride and quinol (Meyer and Witte), 1908, A., i, 671.
**Succinic acid** (*ethanedicarboxylic acid*), and its potassium salts and their crystallography (Marshall and Cameron), 1907, T., 1519; P., 214.
  presence of, in meat extracts (Kutscher and Steudel), 1903, A., ii, 499; (Siegfried: Wolff), 1903, A., ii, 660.
  production of, during alcoholic fermentation (Ehrlich), 1908, A., ii, 416.
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  tetradecylamide of (Shukoff and Schestakoff), 1903, A., i, 398.
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**Succinic acid**, acid esters (Bone, Sudborough, and Sprankling), 1904, T., 534 ; P., 64.
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  μ-*di*amino-, ethyl ester, and its diacetyl and dibenzylidene derivatives and condensation products with ethyl acetoacetate and acetylacetone (Tafel and Stern), 1905, A., i, 417.
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*i*-**Terpineol**, synthesis of, and its nitrosochloride and phenylurethane (PERKIN), 1904, T., 654; P., 86.
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*p*-**Tetra-anisyltetrazen** (WIELAND), 1908, A., i, 1026.
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***s*-Tetraethyl*di*aminodimethylcarbamide** (Einhorn), 1908, A., i, 611.

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***pp*-Tetraethyl*di*aminodiphenyl-ethylene** and **-propylene** (Busignies), 1909, A., i, 736.

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**4:4′-Tetraethyl*di*aminodiphenylmethane,** 2:2′-*di*nitro- (Epstein), 1903, A., i, 580.

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***pp*-Tetraethyl*di*amino-2:4:6:8-*tetra*hydroxy-3:7-dibenzylanthraquinone** (Farbwerke vorm. Meister, Lucius, & Brüning), 1907, A., i,1086.

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**9:10-Tetrahydroanthracene** and 9:10-*di*bromo- (Godchot), 1906, A., i, 495; 1907, A., i, 841.

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**$\Delta^{1(6)}$-Tetrahydrobenzo-α- and -β-naphthindoles** (Borsche, Witte, and Bothe), 1908, A., i, 366.

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*cis*-**Tetrahydrocarvestrenediol**, synthesis of (Fisher and Perkin), 1908, T., 1889.

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*l*-**Tetrahydrocarvone**, oxime and semicarbazone of (Wallach), 1911, A., i, 470.

**Tetrahydrocarvonylacetoacetic acid**, chloro-, ethyl ester, tautomeric forms (Rabe), 1903, A., i, 268; (Rabe and Weilinger), 1903, A., i, 269.

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**Tetrahydrocolumbamine** methyl ether (Feist), 1908, A., i, 102.

**Tetrahydrocolumbine** and its salts (Günzel), 1906, A., i, 977.

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**Tetrahydrocuminol** and its phenylurethane (Walbaum and Hüthig), 1905, A., i, 604.

**Tetrahydrocymene** (Brunel), 1905, A., i, 197.

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- **Tetrahydrodeoxycytisine** and its additive salts and nitroso- (Freund and Horkheimer), 1906, A., i, 302.
- **Tetrahydrodibenzo*spiro*pyran** (Borsche), 1912, A., i, 194.
- **Tetrahydrodicarvelone** (Wallach), 1911, A., i, 471.
- **Tetrahydrodi-coumaric acids** and **-coumarins, α-** and **β-** (Fries and Fickewirth), 1908, A., i, 823.
- **Tetrahydrodi-4:6-dimethylcoumarins,** α- and β- (Fries and Fickewirth), 1908, A., i, 824.
- α- and **β-Tetrahydrodinaphthanthracenes** (W. H. and M. Mills), 1912, T., 2202 ; P., 243.
- **Tetrahydrodinaphthanthraquinone,** *di*hydroxy-, diacetyl derivative (W. H. and M. Mills), 1912, T., 2206.
- **Tetrahydro-β-dinaphthylene oxide** and *di*bromo- (Hönigschmid), 1903, A., i, 165.
- **Tetrahydrodiphenylene oxide,** reduction of (Hönigschmid), 1903, A., i, 165.
- **Tetrahydroellagic acid** (Nierenstein), 1910, A., i, 623.
- **Tetrahydroeucarvone** and its oxime and semicarbazone (Wallach and Köhler), 1905, A., i, 451.
- **Tetrahydroeucarvylamine** and its benzoyl derivative (Wallach and Köhler), 1905, A., i, 451.
- **Tetrahydroflavanthrens,** α- and β-, and their derivatives (Scholl and Holdermann), 1908, A., i, 697.
- **Tetrahydrofuran** (Bourguignon), 1908, A., i, 280.
- **Tetrahydrofuran,** 3-hydroxy-, and its phenylurethane (Pariselle), 1909, A., i, 691.
- *cis*-**Tetrahydrofuran-2:5-dicarboxyldianilide** (Le Sueur and Haas), 1910, T., 184.
- *cis*-**Tetrahydrofuran-2:5-dicarboxylic acid,** anhydride and ammonium salt (Le Sueur and Haas), 1910, T., 183.
- **Tetrahydrofuran-1-mono-** and **-1:1-dicarboxylic acids,** 3-hydroxy- (Traube), 1905, A., i, 13.
- **Tetrahydroglyoxaline,** 2-imino- (*ethyleneguanidine*) and its salts (Schenck), 1910, A., i, 100.
- **Tetrahydro*apo*harmine** and its picrate (Hasenfratz), 1912, A., i, 797.
- **Tetrahydroindanthren,** tetrasodium and tetrabenzoyl derivatives of (Scholl, Steinkopf, and Kabacznik), 1907, A., i, 256 ; (Scholl and Berblinger), 1907, A., i, 257.
- **Tetrahydrojateorrhizine** (Feist), 1908, A., i, 103.
- **Tetrahydrolaserpitin** (Morgenstern), 1912, A., i, 709.
- **Tetrahydrolimonenediphenyldisulphone** (Posner and Tscharno), 1905, A., i, 279.
- **Tetrahydrolinalool** (*βζ-dimethyloctan-ζ-ol*), synthesis of (Enklaar), 1908, A., i, 934.
- **Tetrahydro-1-methylnaphthalene,** 2:3-diketo-derivative of (Fries and Hempelmann), 1909, A., i, 809.
- **1:2:3:4-Tetrahydronaphthalene,** absorption spectrum of (Leonard), 1910, T., 1246 ; P., 143.
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- **1:2:3:4-Tetrahydronaphthalene,** 1- and 2-bromo- (Smith), 1904, T., 729 ; P., 110 ; (Morgan, Micklethwait, and Winfield), 1904, T., 738 ; P., 109.
  - 1- and 2-bromo*di*nitro- (Morgan, Micklethwait, and Winfield), 1904, T., 747 ; P., 109.
- **Tetrahydronaphthalene-1-azo-β-naphthol,** 4-bromo-, and its benzoyl derivative (Morgan, Micklethwait, and Winfield), 1904, T., 749 ; P., 110.
- **Tetrahydronaphthalenephenylsulphone** (Posner and Tscharno), 1905, A., i, 279.
- **Tetrahydronaphthalene-1-sulphinic acid** (Morgan, Micklethwait, and Winfield), 1904, T., 757 ; P., 110.
- **Tetrahydronaphthalene-1-sulphonic acid** and its chloride, anilide, and barium salt (Morgan, Micklethwait, and Winfield), 1904, T., 756 ; P., 110.
- **Tetrahydro-α-naphthoic acid,** menthyl ester, and its rotation (Rupe, Lotz, and Silberberg), 1903, A., i, 566.
- **Tetrahydro-α-naphthoic acid,** 8-amino-, and its methyl ester and acetyl derivative (Schroeter and Rössler), 1903, A., i, 118.
- **Tetrahydro-β-naphthoic acid,** menthyl ester (Rupe and Münter), 1910, A., i, 398.
- **Tetrahydronaphthoic acids,** resolution of (Pickard and Yates), 1906, T., 1101 ; P., 202.
- *ac*-**Tetrahydro-2-naphthol** and its esters, rotation of (Pickard and Kenyon), 1912, T., 1427 ; P., 137.
  - resolution of, by *l*-menthylcarbimide (Pickard and Littlebury), 1906, T., 1254 ; P., 238.

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*ar*-**Tetrahydro-β-naphthylamine,** reaction of, with formaldehyde (Smith), 1904, T., 732; P., 111.
*ar*-**Tetrahydro-β-naphthylamine,** 1- and 4-bromo-, and their acetyl derivatives (Smith), 1904, T., 728; P., 110.
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*ar*-**Tetrahydro-α-naphthylamine-4-azobenzene-4′-sulphonic acid** and its reduction (Morgan, Micklethwait, and Winfield), 1904, T., 754.
*ac*-**Tetrahydro-β-naphthylamino-*d*-methylenecamphor** (Pope and Read), 1909, T., 180.
*ar*-**Tetrahydro-α-naphthylamine-4-sulphonic acid** and the action of *p*-nitrobenzenediazonium chloride on (Morgan, Micklethwait, and Winfield), 1904, T., 755; P., 110.
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**Tetramethyl*di*amino-benzophenones** and **-benzhydrols**, 3:3′- and 3:4′- (v. Baeyer), 1907, A., i, 761.
**Tetramethyl-*p*-*di*aminobenzylbenzhydrol** (Guyot and Pignet), 1908, A., i, 569.
**Tetramethyl-2:4-*di*aminobenzylideneacetophenone**, **-cyanoacetic acid**, ethyl ester, **-hydrazine**, **-malononitrile**, **-*p*-nitrobenzyl** cyanide, and **-rhodanic acid** (Sachs and Appenzeller), 1908, A., i, 187.
**4-Tetramethyl-2′:4′-*di*aminobenzylidene-1-phenyl-3-methyl-5-pyrazolone** (Sachs and Appenzeller), 1908, A., i, 187.
**Tetramethyl*di*aminobenzylphenylsulphone** (Binz and Isaac), 1908, A., i, 940.
**Tetramethyl*di*aminobutane** and its additive salts (Willstätter and Heubner), 1907, A., i, 959.
*αδ*-**Tetramethyl*di*amino-$\Delta^{\beta}$-butene** (Willstätter and v. Schmaedel), 1905, A., i, 514.
*ακ*-**Tetramethyl*di*aminodecane** and its salts (v. Braun), 1912, A., i, 165.
*p*-**Tetramethyl*di*aminodi-*p*-anilino-*m*-dihydroxydiphenylmethane** (Gnehm and Weber), 1904, A., i, 533.

**4′:4″-Tetramethyl*di*amino-2‴:3‴-dimethoxytriphenylmethane** and its hydrochloride (Noelting), 1910, A., i, 177.

**Tetramethyl*di*aminodimethylethylcarbinol** and its esters and their additive salts (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 936.

**Tetramethyl*di*aminodimethylethylcarbinyl benzoate.** See Alypine.

**4:4′-Tetramethyl*di*aminodiphenyl.** See Tetramethylbenzidine.

**9:9-Tetramethyl*di*aminodiphenylacenaphthenone** and its salts (Zsuffa), 1910, A., i, 862.

**Tetramethyl*di*aminodiphenylacridylmethane** and its quinonoid base (Porai-Koschitz, Auschkap, and Amsler), 1912, A., i, 223.

**Tetramethyl-*p*-*di*amino-*p*-diphenyl-*p*-*di*amino-*m*-*di*hydroxydiphenylmethane** (Gnehn and Weber), 1904, A., i, 533.

**Tetramethyl*di*aminodiphenylaminonaphthylmethane** and its acetyl, alkyl, and aryl derivatives (Noelting), 1904, A., i, 621.

**Tetramethyl*di*aminodiphenyl*di*aminonaphthylmethane** and its diacetyl derivative (Noelting), 1904, A., i, 622.

**Tetramethyl*di*aminodiphenylanthrone** (Haller and Guyot), 1903, A., i, 348.

**Tetramethyl*di*aminodiphenyl*di*chloromethane** (Staudinger), 1909, A., i, 907.

**9:10-Tetramethyl*di*aminodiphenyl-9:10-diphenyldihydroanthracene** and its isomeride (Haller and Guyot), 1905, A., ii, 270.

**9:10-Tetramethyl*di*aminodiphenyl-9:10-diphenyl-2-methyldihydroanthracenes,** *cis-* and *trans-*, and their salts (Guyot and Staehling), 1905, A., i, 886.

**αε-Tetramethyl-*pp′*-*di*aminodiphenyl-γ-diphenylmethylene-$\Delta^{\alpha\delta}$-pentadiene** (Staudinger and Kon), 1911, A., i, 879.

**3:8-Tetramethyl*di*aminodiphenyleneazone** and its oxide (Ullmann and Dieterle), 1904, A., i, 269.

***pp*-Tetramethyl*di*aminodiphenylethane, -hexylene, and -phenylethane** (Busignies), 1909, A., i, 736.

**Tetramethyl*di*aminodiphenyl-ethylene, propane,** and **-propylene** (Freund and Mayer), 1906, A., i, 384.

***as*-Tetramethyl*di*aminodiphenylethylene** and its carbinol (Fecht), 1907, A., i, 927.

**Tetramethyl*di*aminodiphenylglycineamide** (Hinsberg), 1908, A., i, 453.

**Tetramethyl*di*aminodiphenylglycollic acid,** ethyl ester (Guyot), 1907, A., i, 640, 641.

**Tetramethyl*di*aminodiphenyl*cyclo*hexylidenemethane,** preparation of (Lemoult), 1912, A., i, 725.

**Tetramethyl-*p*-*di*aminodiphenyl ketone** hydrazone and its benzylidene derivative and ketazine (Wieland and Roseeu), 1911, A., i, 572.
  tetrahydrochloride (Kaufler and Kunz), 1909, A., i, 137.

**Tetramethyl*di*aminodiphenylmalonic acid,** methyl and ethyl esters (Guyot and Michel), 1909, A., i, 158.

**4:4′-Tetramethyl*di*aminodiphenylmethane,** constitution of the methylene derivatives of (Fosse), 1908, A., i, 568.
  use of, in qualitative analysis (Carney), 1912, A., ii, 298.
  trihydrobromide (Kaufler and Kunz), 1909, A., i, 556.
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  dioxide and its derivatives (Bamberger and Rudolf), 1908, A., i, 1011.

**4:4′-Tetramethyl*di*aminodiphenylmethane,** 2:2′-*di*-iodo- (Mascarelli, Toschi, and Zambonini), 1910, A., i, 831.
  2-nitro- (Epstein), 1903, A., i, 580.

**Tetramethyl*di*aminodiphenylmethane-*m*-sulphonic acid** and its sodium salt (Aktien-Gesellschaft für Anilin-Fabrikation), 1907, A., i, 969.

**5-(4′:4″)-Tetramethyl*di*aminodiphenylmethyl-3:3-bis-*p*-dimethylaminophenyloxindole** (Reitzenstein and Breuning), 1910, A., i, 441.

**5-(4′:4″)-Tetramethyl*di*aminodiphenylmethylisatin** and its acetyl derivative and chloride (Reitzenstein and Breuning), 1910, A., i, 440.

**4(or 6)-4′:4″-Tetramethyl*di*aminodiphenylmethyl-5-methylisatin** and its sodium salt (Reitzenstein and Breuning), 1910, A., i, 441.

**5-(4′:4″)-Tetramethyl*di*aminodiphenylmethyl-7-methylisatin** (Reitzenstein and Breuning), 1910, A., i, 441.

**8-Tetramethyl*di*aminodiphenylmethyl-1-naphthoic acid,** and its barium salt (Zsuffa), 1910, A., i, 862.

**Tetramethyl*di*aminodiphenyl-α-naphthylmethane** (Zsuffa), 1910, A., i, 862.

**9:10-Tetramethyl*di-p*-aminodiphenyl-9-phenyl-10-α-naphthyldihydroanthracene** (Guyot and Staehling), 1905, A., i, 887.

*pp*-**Tetramethyl*di*aminodiphenyl-β-propionic acid** (Fosse), 1906, A., i, 976.

**4′:4″-Tetramethyl*di*aminodiphenyl-*o*-tolylmethane,** 3- and 4-amino-, and their oxidation (Bielecki and Koleniew), 1908, A., i, 698.

*p*-**Tetramethyl*di*aminodistyryl ketone** (Sachs and Lewin), 1903, A., i, 38.

**Tetramethyl*di*aminodi-*o*-tolylcarbinol** and its picrate (Rassow and Reuter), 1912, A., i, 586.

**Tetramethyl*di*aminoditolylhydrol,** condensation of, with aromatic bases (Reitzenstein and Runge), 1905, A., i, 301.

**Tetramethyl*di*aminodi-*o*-tolyl ketone** and its salts (Rassow and Reuter), 1912, A., i, 586.

**Tetramethyl*di*amino-*m*-ethoxytriphenylmethane** and its *o*-**carboxylic acid** and its amides and their oxidation products (Fritsch), 1904, A., i, 58.

**Tetramethyl*di*aminofuchsone** (Schlenk and Knorr), 1904, A., i, 808.

*αη*-**Tetramethyl*di*aminoheptane** and its salts (v. Braun), 1912, A., i, 165.

**Tetramethyl-*αζ*-*di*aminohexane,** and its picrate and methiodide (v. Braun), 1910, A., i, 821.

**Tetramethyl*di*amino-$\Delta^2$-*cyclo*hexene** and its salts (Willstätter and Hatt), 1912, A., i, 545.

*pp*-**Tetramethyl*di*amino-2:4:6:8-*tetra*hydroxy-3:7-dibenzylanthraquinone** (Farbwerke vorm. Meister, Lucius, & Brüning), 1907, A., i, 1086.

**4′:4″-Tetramethyl*di*amino-2‴-hydroxy-3‴-methoxytriphenylmethane** and its hydrochloride (Noelting), 1910, A., i, 177.

**4:4′-Tetramethyl*di*amino-4″-methyltriphenylmethane,** 3″-amino-, and 5″-amino-, compounds of, with proparg-aldehyde (Reitzenstein and Bönitsch), 1912, A., i, 663.

**Tetramethyl*di*amino*cyclo*octadiene** and its salts (Willstätter and Waser), 1912, A., i, 19.

**Tetramethyl*di*amino*cyclo*octane** (Willstätter and Waser), 1912, A., i, 19.

**Tetramethyl*di*aminopentane** and its salts (v. Braun), 1912, A., i, 165.

**3:9-Tetramethyl*di*aminophenoxazonium** nitrate and platinichloride (Kehrmann and Poplawski), 1909, A., i, 516.

**Tetramethyl*di*aminophenylbenzylsulphone,** nitronitroso-, formula of (Binz), 1909, A., i, 144.

**Tetramethyl*di*aminophenyldimethylcarbinyl** (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 936.

**Tetramethyl*di*aminophenyldimethylcarbinyl** benzoate hydrochloride (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 936.

*as*-**Tetramethyl*di*aminophenyldiphenylenemethane** (Guyot and Granderye), 1903, A., i, 748 ; 1905, A., i, 248.

**Tetramethyl*tri*aminophenyldi-*o*-tolylcarbinol** and its hydrochloride (Rassow and Reuter), 1912, A., i, 586.

**Tetramethyl*di*aminophenyl-ethylcarbinol** and **-hydroxy*tri*chloroethane** (Sachs and Appenzeller), 1908, A., i, 187.

**Tetramethyl*di*aminophenyl-*m*-methyl-** and **-*m*-nitro-diphenylenemethanes** (Guyot and Granderye), 1905, A., i, 248.

**Tetramethyl*di*aminophenyloxanthranol,**
  condensation products of, with benzene, dimethylaniline, and toluene (Haller and Guyot), 1904, A., i, 83.
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**Tetramethyl*di*aminophenylphenylenenaphthylenemethane** (Guyot and Granderye), 1905, A., i, 248.

**4:4′- and 4:6′-Tetramethyl*di*aminophenyl-*m*-tolylmethanes** and their salts (v. Braun and Kruber), 1912, A., i, 970.

**Tetramethyl-*pp*′-*di*aminotetraphenylethylene** (Staudinger and Kon), 1911, A., i, 879.
  and its salts, glycol, and **3:3′-disulphonic acid** and its salts (Willstätter and Goldmann), 1906, A., i, 980.

**Tetramethyl*di*aminothiobenzophenone** (Lambrecht and Weil), 1905, A., i, 243.

**Tetramethyl*di*aminotriphenylacetic acid,** ethyl ester (Haller and Guyot), 1907, A., i, 565.

**Tetramethyl*di*aminotriphenylcarbinol,** 3:4-dihydroxy-, and its diacyl derivatives (Liebermann), 1903, A., i, 861.

**Tetramethyl*di*aminotriphenylcarbinols** (v. Baeyer), 1907, A., i, 761.

**Tetramethyl*di*aminotriphenylcarbothiol** and its analogue (Lambrecht and Weil), 1905, A., i, 243.

**Tetramethyl*di*aminotriphenylmethane,** *di-* and *tri*-hydroxy- (Votoček and Krauz), 1909, A., i, 518.
**2:4-Tetramethyl*di*aminotriphenylmethane** (Sachs and Appenzeller), 1908, A., i, 188.
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**4:4′-Tetramethyl*di*aminotriphenylmethane** dioxide and its derivatives (Bamberger and Rudolf), 1908, A., i, 1012.
**4′:4″-Tetramethyl*di*aminotriphenylmethane,** 3:4-*di-* and 3:4:2′:2″-*tetra*-hydroxy-, and their acyl derivatives (Liebermann), 1903, A., i, 860.
**4:4′-Tetramethyl*di*aminotriphenylmethane-3″-azophenol,** sodium salt (Reitzenstein and Bonitsch), 1912, A., i, 740.
*pp′*-**Tetramethyl*di*aminotriphenylmethane-*m*-carboxylic acid** (Simonis, Boehme, and Benenson), 1912, A., i, 565.
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  bromide hydrobromide (Kaufler and Kunz), 1909, A., i, 556.
    *s-di-ω*-cyano- (v. Braun), 1908, A., i, 608.
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  hydroxide and its hydrates (Walker and Johnston), 1905, T., 955 ; P., 210.
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ββγδ-**Tetramethylamylene** βγ-**glycol** (Richard), 1911, A., i, 8.
**2:7:9:10-Tetramethylanthracene** dihydride (Lavaux), 1905, A., i, 698.
**1:3:5:7-Tetramethylanthraquinone,** 4:8-*di*nitro- and 2:4:6:8-*tetra*nitro- (Seer and Ehrenzweig), 1912, A., i, 276.
**Tetramethylarsonium** iodide and its pharmacological action (Bürgi), 1907, A., i, 302.
**2:4:3′:5′-Tetramethylazobenzene-2-hydrazinesulphonic acid** and its salts (Tröger and Westerkamp), 1910, A., i, 208.
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**Tetramethylbenzidine,** 2:2′-*di*amino- and -*di*nitro- (Ullmann and Dieterle), 1904, A., i, 269.
  *s-ω-di*cyano- (v. Braun), 1908, A., i, 625.
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**2:4:2′:4′-Tetramethylbenzophenone** (Boëseken), 1907, A., i, 855.
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**2:4:5:6-Tetramethyl-1:3:7:9-benzotetrazole** (Bülow and Haas), 1910, A., i, 203.
**Tetramethyl bromo-** and **chloro-glucose** (Irvine and Moodie), 1908, T., 105.
ββγγ-**Tetramethylbutane.** See Hexamethylethane.
**1:1:3:3-Tetramethyl*cyclo*butane-2:4-diol,** and its diacetyl derivative (Wedekind and Miller), 1912, A., i, 17.
**1:1:3:3-Tetramethyl*cyclo*butane-2:4-dione** (Wedekind, Weisswange, and Erdmann), 1906, A., i, 437.
  action of ammonia on (Wedekind and Miller), 1910, A., i, 324.
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**1:3:4:7-Tetramethylcarbazole** and its picrate (Borsche, Witte, and Bothe), 1908, A., i, 367.
**1:2:4:5-Tetramethyl-1-*di*chloromethyl-*cyclo*hexadien-4-ol** (Auwers and Köckritz), 1907, A., i, 402.
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**1:1:3:3-Tetramethyl-2:4-diethyl*cyclo*butane** (Wedekind and Miller), 1912, A., i, 17.
**1:1:3:3-Tetramethyl-2:4-diethyl*cyclo*butane-2:4-diol** and *di*-iodo- (Wedekind and Miller), 1912, A., i, 17.
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**5:5:5′:5′-Tetramethyldi*cyclo*hexane-1:1′- and -3:3′-diol**, and their diacetyl and dibenzoyl derivatives (Crossley and Renouf), 1906, P., 303; 1907, T., 71.
**5:5:5′:5′-Tetramethyl-$\Delta^{2:2'}$-di*cyclo*hexene-1:1′-diol**, and its bromo-derivative (Crossley and Renouf), 1906, P., 303; 1907, T., 76.
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**1:2:3:6-Tetramethyl-2:3-dihydrobenziminazole** and 2-hydroxy-, and their resolution (Fischer and Römer), 1906, A., i, 539.
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**ααα′α′-Tetramethyldihydromuconic acid** and its oxidation product (Bone and Henstock), 1903, T., 1384; P., 247.
**1:1:2:2-Tetramethyl-3:4-dimethylene-*cyclo*butane** (Lebedeff), 1912, A., i, 173.
**Tetramethyldinaphthanthracene**, formation of (Homer), 1907, T., 1107; P., 88.
**3:5:3′:5′-Tetramethyl-4:4′-diphenol** and its diacetate and 2-chloro-derivative and **-4:4′-diphenoquinone** (Auwers and v. Markovits), 1905, A., i, 219.
**3:4:3′:4′-Tetramethyldiphenyl** and amino-, 6-nitro-, and *tetra*nitro-, and their derivatives (Crossley and Hampshire), 1909, P., 162; 1911, T., 721; P., 90.
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**2:4:2′:4′-Tetramethyldiphenyldicarboxylic acid** (Liebermann and Kardos), 1912, A., i, 466.
**2:4:2′:4′-Tetramethyldiphenyl-3:3′- and 5:5′-diphthaloylic acid** and disulphonic acid of the former (Scholl, Liese, Michelson, and Grunewald), 1910, A., i, 264.
**2:5:2′:5′-Tetramethyldiphenylmethane**, 4:4′-*di*amino-, 3:6:3′:6′-*tetra*bromo-4:4′-*di*hydroxy-, and 4:4′-*di*hydroxy- (Auwers), 1907, A., i, 917.
**2:6:2′:6′-Tetramethyldiphenylmethane**, 4:4′-*di*amino- (Auwers and Rietz), 1907, A., i, 919.
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**3:6:3′:6′-Tetramethyldiphenylmethane**, 2:5:2′:5′-*tetra*bromo-4:4′-*di*hydroxy-, and its diacetate (Auwers), 1907, A., i, 918.
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*N*-diacetyl derivative (Haga and Majima), 1903, A., i, 291.
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**3:3′-Tetramethylenedibenzo*spiro*pyran** (Borsche and Geyer), 1912, A., i, 894.

**Tetramethylenepiperylium** salts (Albert), 1909, A., i, 178.

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**Tetramethylethylene.** See βγ-Dimethyl-Δβ-butylene.
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**Tetramethylethylenediamine** and its salts (Knorr), 1904, A., i, 916, 938.
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**2:2:6:6-Tetramethyl-4-ethylpiperidine,** 4-hydroxy-, and its salts (Clarke and Francis), 1912, A., i, 722.

**2:2:6:6-Tetramethyl-4-ethyl-1:2:5:6-tetrahydropiperidine.** See 4-Ethyltriacetoneamine.

**Tetramethylflaveosine,** *tetra*bromo-, and ethyl ester and its acridinium methyl sulphate derivative (Grandmougin and Lang), 1909, A., i, 972.

**2:4:5:7-Tetramethylfluoran** (Bentley, Gardner, and Weizmann), 1907, T., 1637.

**Tetramethylfluorone,** *tri*hydroxy-, constitution of, and its bromo- and acetyl derivatives (Wenzel and Schreier), 1904, A., i, 913.

**Tetramethyl fructose,** crystalline (Purdie and Paul), 1907, T., 295; P., 33.

**ααδδ-Tetramethyl-fulgenic acid** and **-fulgide** (Stobbe and Lenzner), 1905, A., i, 857.

**Tetramethyl galactose** and its reactions (Irvine and Cameron), 1904, T., 1075; P., 174.

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**αββ′β′-Tetramethylguanidine** aurichloride (Schenck), 1911, A., i, 843.

**ααββ-** and **ααβγ-Tetramethylguanidines,** salts of (Schenck), 1912, A., i, 425.

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**Tetramethylhæmatein** (Engels, Perkin, and Robinson), 1908, T., 1141.

**Tetramethylhæmatoxylin,** acetyl derivative (Herzig, Pollak, and Kluger), 1906, A., i, 872.

**Tetramethylhæmatoxylone** and its oxime and its acetyl derivative (Herzig and Pollak), 1904, A., i, 81.
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phenylhydrazine compound of, and its acetyl derivative (Herzig and Pollak), 1906, A., i, 198, 871.

**Tetramethylhæmatoxylone,** *di*nitro- (Herzig and Pollak), 1903, A., i, 270.
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**ω-Tetramethylhæmatoxylone** and its nitro-derivatives and their dehydroacetyl compounds, and its methyl ether and its nitro-derivatives (Herzig, Pollak, Fischer, and Mayrhofer), 1906, A., i, 871.

**Tetramethyl*cyclo*heptadiene** (Rupe and Kerkovius), 1911, A., i, 848.

**Tetramethyl*cyclo*heptatriene** and its dihydrobromide (Rupe and Kerkovius), 1911, A., i, 847.

**γγεε-Tetramethylheptan-δ-ol** and its phenylurethane (Haller and Bauer), 1910, A., i, 300.

**γγεε-Tetramethylheptan-δ-one** (Haller and Bauer), 1910, A., i, 300.

**2:2:7:7-Tetramethylhexamethyleneimine** and its benzoyl derivative and additive salts (Konowaloff and Woinitsch-Sianoschensky), 1905, A., i, 826.

**1:2:4:5-Tetramethyl*cyclo*hexane** (Willstätter and Hatt), 1912, A., i, 545.

**βγδε-Tetramethylhexane-γδ-diol** and its isomeride (Beaume), 1903, A., i, 727.

**Tetramethyl*cyclo*hexanedione** and its semicarbazone (Bamberger and Blangey), 1911, A., i, 883, 884.

**ββδδ-Tetramethylhexan-γ-ol** and its phenylurethane (Haller and Bauer), 1910, A., i, 220.

**ββδδ-Tetramethylhexan-γ-one** (Haller and Bauer), 1910, A., i, 220.

**1:1:4:4-Tetramethyl*cyclo*hexan-3-one**, 4-*di*chloro- (Auwers and Hessenland), 1908, A., i, 551.

**Tetramethylindigotin** (Gattermann), 1912, A., i, 984.

**1:1′:5:5′-Tetramethylindigotin** (Ettinger and Friedländer), 1912, A., i, 728.

**4:5:4′:5′-Tetramethylindigotin** (Kunckell and Schneider), 1912, A., i, 915.

**2:2:3:5-Tetramethyl-ψ-indole** methiodide (Konschegg), 1906, A., i, 452.

**2:3:3:5-Tetramethylindolenine**, action of Grignard's reagent on (Plancher and Ravenna), 1907, A., i, 152.
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**Tetramethyl laevulose**, preparation of, from methyl methylfructoside (Irvine and Hynd), 1909, T., 1227.

**Tetramethyl mannose** and **mannoside** (Irvine and Moodie), 1905, T., 1462; P., 227.
  and **α-methylmannose**, addition of alkyl haloids to (Irvine and Moodie), 1906, T., 1585; P., 205.

**Tetramethyl mannoseanilide** (Irvine and McNicoll), 1910, T., 1452.

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**1:3:3:5-Tetramethyl-2-methyleneindoline** and its additive salts (Konschegg), 1906, A., i, 453.

**1:3:3:7-Tetramethyl-2-methyleneindoline** and its additive salts (Plangger), 1905, A., i, 718.

**Tetramethyl methylfructoside** and its hydrolysis (Purdie and Paul), 1907, T., 293; P., 33.

**Tetramethyl methylgalactosides** (Irvine and Cameron), 1905, T., 902; P., 191.

**Tetramethyl α- and β-methylgalactosides** (Irvine and Cameron), 1904, T., 1078; P., 174.

**Tetramethyl methylglucosides**, stereoisomeric, and **Tetramethyl glucose** (Purdie and Irvine), 1904, T., 1049; P., 173.

**Tetramethyl α- and β-methylglucosides** (Irvine and Cameron), 1905, T., 901; P., 191.
  addition of alkyl haloids to (Irvine and Moodie), 1906, T., 1584; P., 204.

**Tetramethylnaphthalene**, preparation of (Homer), 1907, T., 1107; P., 88.
  absorption spectrum of (Homer and Purvis), 1910, T., 280; P., 5.

**1:4:5:8-Tetramethylnaphthalene**, absorption spectra of (Homer and Purvis), 1908, T., 1321; P., 147.

**Tetramethylnorstrophantin** (Herzig and Schönbach), 1912, A., i, 707.

**ββηη-Tetramethyloctane** (Delacre), 1912, A., i, 1.

**ααβζ-Tetramethyl-$\Delta^{\epsilon}$-octenoic acid** (*αα-dimethyl-αβ-dihydrogeranic acid*), β-hydroxy- (Tiffeneau), 1908, A., i, 500.

**Tetramethylorcinol**, *di*bromo-, and its derivatives (Herzig, Wenzel, Zeidler, and Schwadron), 1911, A., i, 777.

**2:4:2′:4′-Tetramethyloxalyldiacetophenone** and its dioximino-derivative (Widman and Virgin), 1909, A., i, 657.

**Tetramethylpentamethylene oxide** and dichlorohydrin from (Bruylants), 1909, A., i, 625.

**βγγδ-Tetramethylpentane**, βδ-*di*hydroxy-, synthesis and decomposition of (Slavjanoff), 1907, A., i, 578.

**ββδδ-Tetramethylpentan-γ-ol** and its formyl derivative and phenylurethane (Haller and Bauer), 1910, A., i, 220.

**1:2:2:3-Tetramethyl*cyclo*pentan-4-ol** and its phenylurethane (Locquin), 1911, A., i, 792.

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**1:2:2:3-Tetramethyl*cyclo*pentan-4-one** and its semicarbazones (Locquin), 1911, A., i, 792.

**1:1:3:5-Tetramethyl*cyclo*pentan-4-one-2-carboxylic acid** (1:1:3:5-*tetramethyl-4-ketopentamethylene-2-carboxylic acid*) and its oxime and semicarbazone (Perkin and Thorpe), 1906, T., 787.

**2:3:3:4-Tetramethyl-$\Delta^1$-*cyclo*penten-5-one.** See 2-Methyl-laurenone.

**Tetramethylphenosafranine** and its salts (Balls, Hewitt, and Newman), 1912, T., 1848.

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**Tetramethylphloroglucinolaldehyde** and its potassium salt, oxime, and methyl ether (Herzig, Wenzel, and Rona), 1906, A., i, 93.

**Tetramethylphloroglucinolphthalein** (Liebermann and Zerner), 1903, A., i, 488.

**Tetramethylphosphonium** periodide (Auger and Billy), 1904, A., i, 984.

**2:4:2′:4′-Tetramethyl-5:5′-phthaloyldiphenyl-3-phthaloylic acid** (Scholl, Liese, Michelson, and Grunewald), 1910, A., i, 264.

**Tetramethylpicene,** solid, absorption spectra of, and of its solutions (Purvis and Homer), 1909, A., ii, 531.

**ααεε-Tetramethylpimelamide** (Haller and Bauer), 1911, A., i, 652.

**ααεε-Tetramethylpimelic acid** (Haller and Bauer), 1911, A., i, 652.

**Tetramethylpiperazinium** salts (Strömholm), 1903, A., i, 463.

  *di*-iodide and mercurichlorides (Strömholm), 1903, A., i, 139.

**2:6-Tetramethylpiperidine** and its additive salts, methylurethane, and benzoyl derivative (Franchimont and Friedmann), 1905, A., i, 80.

***s*-Tetramethylpropane.** See βδ-Dimethylpentane.

**ααββ-Tetramethylpropyl** acetate and chloride (Henry), 1907, A., i, 674.

**3:4:4:6-Tetramethyl-2-*iso*propyltetrahydro-1:3-oxazine** and its salts (Kohn), 1904, A., i, 933.

**1:2:4:6-Tetramethylpyridinium** perchlorate (v. Baeyer and Piccard), 1911, A., i, 901.

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**Tetramethylpyrrole** and its picrate (Plancher and Zambonini), 1912, A., i, 646.

**2:2:5:5-Tetramethylpyrrolidine** and its benzoyl derivative (Konowaloff and Woinitsch-Sianoschensky), 1905, A., i, 826.

**2:2:5:5-Tetramethylpyrrolidine-3-carboxylic acid** and its esters and additive salts (Pauly and Hültenschmidt), 1904, A., i, 87.

**1:2:2:4-Tetramethyl-5-pyrrolidone,** 4-amino-, and its phenylthiocarbamide (Kohn), 1908, A., i, 829.

**Tetramethylpyrroline** and its **3-carboxylic acid** (Pauly and Hültenschmidt), 1904, A., i, 88.

**Tetramethylquercitrin** and its acetyl derivative (Herzig and Schönbach: Herzig and Böttcher), 1912, A., i, 707.

**2:5:6:8-Tetramethylquinoline,** salts of (Garrod, Jones, and Evans), 1912, T., 1393.

**Tetramethylrhodamine** and its hydrochloride (Noelting and Dziewoński), 1905, A., i, 935.

**Tetramethylrosaminesulphonic acid** and dihydroxy-, degradation of (Liebermann and Glawe), 1904, A., i, 268.

**Tetramethylrosaminesulphonic acid,** *di*hydroxy- (Liebermann), 1903, A., i, 861.

**Tetramethylsparteinium** dihydroxide (Moureu and Valeur), 1908, A., i, 43.

**Tetramethylstilbene** dibromide (Law), 1907, T., 752.

**2:5:2′:5′-Tetramethylstilbene,** 4:4′-*di*hydroxy-, and its diacetate (Auwers,) 1903, A., i, 622.

**α:2:4:5-Tetramethylstyrene,** β-chloro- (Auwers and Köckritz), 1907, A., i, 403.

**ββεε-Tetramethylsuberic acid** and its esters and salts, preparation of (Walker and Wood), 1906, T., 599; P., 104.

  bromo- and hydroxy-derivatives of (Wood), 1906, T., 604; P., 104.

**Tetramethylsuccinic acid,** acid ester (Bone, Sudborough, and Sprankling), 1904, T., 554; P., 64.

**2:2:5:5-Tetramethyltetrahydrofuran,** 3-hydroxy-, and its salts (Dupont), 1912, A., i, 290.

**3:4:4:6-Tetramethyltetrahydro-1:3-oxazine** and its salts (Kohn), 1904, A., i, 932.

**1:4:6:6-Tetramethyl-$\Delta^3$-tetrahydro-2-pyridone** and its additive salts (Piccinini), 1908, A., i, 51.

**1:4:6:6-Tetramethyl-$\Delta^3$-tetrahydro-2-pyridone,** 3-amino-, and its platinichloride, and 3-hydroxy- (Piccinini), 1908, A., i, 908.

**1:4:6:6-Tetramethyl-$\Delta^3$-tetrahydro-2-pyridone-3-carboxylic acid** and its amide and salts (Piccinini), 1908, A., i, 679.

**1:2:6:8-Tetramethyltetrahydroquinoline** and its salts (Jones and Evans), 1911, T., 337.

**2:5:6:8-Tetramethyltetrahydroquinoline** and its salts and benzoyl derivative (Garrod, Jones, and Evans), 1912, T., 1393; P., 164.

*s*-**Tetramethyltetramethylene** oxide (Henry), 1906, A., i, 922.

**2:2:5:5-Tetramethyltetramethyleneimine.** See 2:2:5:5-Tetramethylpyrrolidine.

**Tetramethylthiocarbamide** (Billeter), 1910, A., i, 545.
 methiodide (Delépine), 1911, A., i, 23.

**Tetramethyl*iso*thiocarbamide** and its picrate (Delépine), 1911, A., i, 23.

"**Tetramethylthioindigo**" (Kalle & Co.), 1912, A., i, 487.

**Tetramethylthionine,** amino-, benzoyl derivative of, and its iodide and hydrochloride (Gnehm and Kaufler), 1906, A., i, 389.

**Tetramethylthiouram** sulphide (v. Braun and Stechele), 1903, A., i, 619.

αaγγ-**Tetramethyltricarballylic** acid, preparation of, and its salts and anhydro-acid (Henstock and Sprankling), 1907, T., 354; P., 32.

**Tetramethyltrimethylenediamine** and its additive salts (Knorr and Roth), 1906, A., i, 458.

**1:2:4:4-Tetramethyltrimethyleneimine** and its additive salts and methiodide and its salts (Kohn), 1907, A., i, 338; (Kohn and Morgenstern), 1907, A., i, 682.

**1:3:4:5-Tetramethyluracil** (Kircher), 1912, A., i, 54.

**Tetramethylureideindoaniline** (Piloty and Finckh), 1904, A., i, 821.

**Tetramethyluric acid,** degradation of (Biltz), 1910, A., i, 522.

**Tetramethylxanthen,** *tetra*hydroxy-, and its tetra-acetyl derivative (Wenzel and Schreier), 1904, A., i, 913.

**1:3:7:8-Tetramethylxanthine,** 7-*mono*- and 8-*tri*-chloro- (Boehringer & Söhne), 1904, A., i, 340.

**Tetramic acid** and its oximino-derivative (Benary), 1911, A., i, 673.

**Tetranaphthyl,** formation of (Homer), 1907, T., 1112; P., 88.
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**Tetra-β-naphthyltetrazen** (Wieland and Süsser), 1912, A., i, 905.

*Tetranthera polyantha* var. *citrata*, oil from the bark, leaves, and fruit of (Charabot and Laloue), 1908, A., i, 279; (Roure-Bertrand Fils), 1908, A., i, 558.

**Tetranuclease** (Jones), 1912, A., i, 671.

**Tetraoxyabietic acid** (Fahrion), 1907, A., i, 329.

**Tetraoxy-2-methylthiophen** and tribromo-, tetrabromide, and polynitro- (Lanfry), 1911, A., i, 1009.

**Tetraoxythiophen** and its octabromide (Lanfry), 1911, A., i, 740.

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ββεε**Tetra-*p*-phenetidinohexane-γδ-dicarboxylic acid,** ethyl ester and phenetidide of (Rossi), 1906, A., i, 982.

**Tetraphenylacetone** (Smedley), 1910, T., 1491; P., 149; (Staudinger and Göller), 1911, A., i, 307.

**Tetraphenylallene** and its isomeride (Vorländer and Siebert), 1906, A., i, 345.

**Tetraphenyl*di*aminoazobenzene** (Haeussermann), 1906, A., i, 910.

**Tetraphenyl*di*aminobiuret** (Michaelis), 1903, A., i, 471.

**Tetraphenylanthraxylilene** (Padova), 1909, A., i, 167.

ααβδ-**Tetraphenylbutadiene** and its dibromide (Staudinger and Buchwitz), 1910, A., i, 47.

ααδδ-**Tetraphenylbutadiene** (Valeur), 1903, A., i, 416.

*s*-**Tetraphenylbutane** (Fromm and Achert), 1903, A., i, 341.

ααδδ-**Tetraphenylbutane-αδ-diol** and the products of its dehydration (Valeur), 1903, A., i, 416.

ααδδ-**Tetraphenylbutane-αδ-diol,** *r*-β-amino-, and its salts (Paal and Weidenkaff), 1907, A., i, 131.

**2:2:4:4-Tetraphenyl*cyclo*butane-1:3-dione** (Staudinger and Göller), 1911, A., i, 306.

ββεε-**Tetraphenyl-Δγ-butinene-βε-diol** (Dupont), 1910, A., i, 456.

αβγγ-**Tetraphenylbutyrolactone** (Reimer and Reynolds), 1908, A., i, 989.

**Tetraphenylcarbamic** phenylcarbamide (Roux), 1903, A., i, 463.

**Tetraphenylcarbamine** disulphide (v. Braun and Rumpf), 1903, A., i, 620.

**Tetraphenylcarbazide** (Acree), 1903, A., i, 862.

**Tetraphenylchloro-** and *m-di*chloro-quinodimethane (Staudinger and Bereza), 1911, A., i, 462.
**Tetraphenyldiethylamine** and its nitrosoamine (Busch and Leefhelm), 1908, A., i, 152.
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**1:2:4:5-Tetraphenyl-3:6-dihexylhexahydro-1:2:4:5-tetrazine** (Rassow and Baumann), 1910, A., i, 79.
**9:9:10:10-Tetraphenyldihydroanthracene** and its derivatives (Haller and Guyot), 1905, A., i, 188.
**3:4:5:6-Tetraphenyldihydro-1:2-diazine** (Japp and Wood), 1905, T., 711 ; P., 154.
**2:2:5:5-Tetraphenyl-2:5-dihydrofuran** (Purdie and Arup), 1910, T., 1542 ; P., 199.
**1:3:4:5-Tetraphenyl-2:3-dihydro-2-glyoxalone** and its picrate (Brazier and McCombie), 1912, T., 2354 ; P., 287.
**1:3:4:5-Tetraphenyl-2:3-dihydro-2-glyoxalthione** (Brazier and McCombie), 1912, T., 2357 ; P., 288.
**Tetraphenyldihydrotriazole** (Busch and Ruppenthal), 1911, A., i, 87.
**1:2:4:5-Tetraphenyl-3:6-dinaphthyldihydropyrazine** (Mayer), 1904, A., i, 784.
**Tetra-*ω*-phenyldi-*ω*-pyrryl-*p*-xylene** (Khotinsky and Patzewitch), 1909, A., i, 830.
**Tetraphenylene-ethylene** (*dibiphenylene-ethylene*) dichloride (Norris, Thomas, and Brown), 1911, A., i, 32.
**Tetraphenylenefuran** (Japp and Knox), 1905, T., 684.
**Tetraphenylenesuccinaldehyde** (Wislicenus and Russ), 1910, A., i, 841.
**Tetraphenylethane** (Manchot and Krische), 1905, A., i, 142 ; (Oddo), 1908, A., i, 748.
**Tetraphenylethane,** *o*-bromo-, *o*-chloro-, and *di-p*-chloro-*o*-bromo- (Gomberg and van Slyke), 1911, A., i, 361.
  *mono*chloro-, and *αβ-di*chloro- (Schmidlin and v. Escher), 1910, A., i, 369.
  *αβ-di*chloro-, preparation of (Finkelstein), 1910, A., i, 469.
  4:4′:4″:4″-*tetra*chloro- (Montagne), 1907, A., i, 141.
    crystalline form of (Jaeger), 1907, A., i, 1050.
*αβββ*-**Tetraphenylethane** and its bromo-, chloro-, and *tetra*nitro-derivatives (Gomberg and Cone), 1906, A., i, 414, 821.
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**Tetraphenylethylene,** *tetra-p*-bromo- (Goldthwaite), 1904, A., i, 150.
  4:4′:4″:4‴-*tetra*chloro-, and its dichloride (Norris, Thomas, and Brown), 1911, A., i, 32.
*ααδδ*-**Tetraphenylerythritol** (Frankland and Twiss), 1904, T., 1666 ; P., 245.
*ααδδ*-**Tetraphenyl-fulgenic acid** and **-fulgide** (Stobbe and Lenzner), 1905, A., i, 857.
**1:2:4:5-Tetraphenylglyoxaline** and its salts (Everest and McCombie), 1911, T., 1748 ; P., 209.
**Tetraphenylglyoxalone** and its dihydroxy-derivative (Biltz and Kosegarten), 1909, A., i, 743.
**Tetraphenylguanidine** and its platinichloride (Steindorff), 1904, A., i, 452.
**Tetraphenylheptacyclene** (Liebermann and Lindenbaum), 1905, A., i, 523.
*ααβζ*-**Tetraphenylhexa-$\Delta^{\alpha\gamma\epsilon}$-triene** and its tetrabromide (Staudinger and Buchwitz), 1910, A., i, 47.
**1:3:5:5-Tetraphenylhydantoin** (Biltz and Kosegarten), 1909, A., i, 743.
**Tetraphenylhydrazine** (Wieland and Gambarjan), 1906, A., i, 453 ; (Wieland), 1911, A., i, 569.
  decomposition of, with hydrogen chloride (Gambarjan), 1908, A., i, 1016.
**Tetraphenylhydrazine,** *p*-nitro- (Wieland and Roseeu), 1912, A., i, 906.
**Tetraphenylmethane** and amino- (Ullmann and Münzhuber), 1903, A., i, 245.
  and nitro- (Gomberg and Berger), 1903, A., i, 473.
  preparation of (Freund), 1906, A., i, 574.
**Tetraphenylmethane,** 3-bromo-4:5-*di*hydroxy-, 3-chloro-4:5-*di*hydroxy-, and 3:4-*di*hydroxy-, and their acetates (Zincke and Wugk), 1909, A., i, 23.
  *p*-hydroxy-, bromo-, chloro-, and nitro-derivatives, and their acetates and salts (Zincke and Wugk), 1909, A., i, 22.
  *di*hydroxy- (v. Meyer and Fischer), 1911, A., i, 121.

**Tetraphenylmethane,** *di-p*-hydroxy-, and its bromo- and bromonitro-derivatives, and their diacetates (Zincke and Wugk), 1909, A., i, 26.

**Tetraphenylmethaneazodimethylaniline** (Ullmann and Münzhuber), 1903, A., i, 245.

**Tetraphenylmethylenediamine** (Houben and Arnold), 1908, A., i, 534.

**Tetraphenyl-α-naphthaquinodimethane** (Staudinger), 1908, A., i, 411.

**Tetraphenyloxal-amidine** and its picrate and **-hydrazidine** (Bauer), 1907, A., i, 603.

**ααεε-Tetraphenylpentan-γ-one** and its oxime and β-benzoyl derivative (Kohler and Heritage), 1906, A., i, 96.

**ααεε-Tetraphenylpentan-γ-one,** β-bromo- (Kohler), 1907, A., i, 1053.

**αβδε-Tetraphenylpentan-γ-one-αε-diol** and its diacyl derivatives (Goldschmiedt and Spitzauer), 1904, A., i, 64.

**Tetraphenyl*cyclo*pentene** (Auerbach), 1903, A., i, 412.

**αγεε-Tetraphenyl-$\Delta^{\alpha}$-penten-ε-ol** (Reynolds), 1911, A., i, 861.

*s*-**Tetraphenyl-propane** and **-propylene** and its bromo-derivative (Vorländer and Siebert), 1906, A., i, 346.

**αβγγ-Tetraphenyl-$\Delta^{\alpha}$-propenol** and its peroxide (Kohler), 1906, A., i, 754.

**ααγγ-Tetraphenylpropylene alcohol** (Vorländer, Siebert, and Osterburg), 1906, A., i, 346.

**Tetraphenylpyrrole** (Clarke and Lapworth), 1907, T., 704; P., 90.

**Tetraphenylquinodimethane** and bromo-, preparation of (Tschitschibabin), 1908, A., i, 872.

**Tetraphenylsuccinonitrile,** *tetra*chloro- (Stollé and Schmidt), 1912, A., i, 981.

**Tetraphenyltetrahydrofuran** (Valeur), 1903, A., i, 416.

*iso***Tetraphenylthiocarbamide** and its platinichloride (Steindorff), 1904, A., i, 452.

**Tetraphenyltoluquinodimethane** (Staudinger and Bereza), 1911, A., i, 462.

**Tetraphenyl-*m*-tolyldiguanide** and its platinichloride (Alway and Viele), 1903, A., i, 201.

**Tetraphenyltrimethyl*cyclo*hexanones,** stereoisomeric (Kohler), 1907, A., i, 536.

**Tetraphenyl-*p*-xylene** and *-p*-xylylene chloride and glycol (Ullmann and Schlaepfer), 1904, A., i, 570.

**Tetraphenylxyloquinodimethane** (Staudinger), 1908, A., i, 411.

**Tetraphenyl-*p*-xylylene** and its bromide (Thiele and Balhorn), 1904, A., i, 491.
  glycol dimethyl ether (Thiele and Balhorn), 1904, A., i, 491.

**Tetrapiperonylerythritol** (Law), 1906, T., 1519.

**Tetrapropylammonium** chloride, specific volume of solutions of (McDavid), 1912, A., ii, 433.
  hydroxide, heptahydrate of (Crichton), 1907, T., 1796; P., 236.

**Tetrapropylsuccinic acid** and its anhydride and methyl hydrogen ester (Crichton), 1906, T., 933; P., 162.

**Tetrapropylthiocarbamide** (Delépine), 1911, A., i, 23.

**Tetrapropyl*iso*thiocarbamide** (Delépine), 1911, A., i, 23.

**Tetrapyridinechromium,** *di*fluoro-, salts (Costăchescu), 1912, A., i, 493.

**Tetrapyridineferrous** chloride (Costăchescu and Spacu), 1912, A., i, 494.

**Tetraresorcinolmelliteins.** See Dixanthylbenzene-2:4:5:6-tetracarboxylic acids, 3:6:9:3′:6′:9′-*hexa*hydroxy-.

**Tetrarin** (Gilson), 1903, A., i, 355.

**Tetrasulphaminoplatinous acid,** ammonium, potassium, and sodium salts (Ramberg and Kallenberg), 1912, A., ii, 651.

**Tetrasulphido-*p*-phenylenediamine** (Green and Perkin), 1903, T., 1211; P., 206.

**Tetrathiazoles,** 2-imino- (Young and Crookes), 1905, P., 307.

**Tetrathiocarbamide** potassium iodide (Werner), 1906, P., 245.

**Tetrathionic acid.** See under Sulphur.

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*iso***Thiopyrine.** See 3-Phenyl-1:2-dimethylpyrazole, 2:5-thio-.

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**3-Tolualdehyde-5-sulphonic acid**, 4-hydroxy- (Farbenfabriken vorm. F. Bayer & Co.), 1911, A., i, 459.
*p*-**Tolualdehyde-*p*-tolylhydrazone** (Padoa and Graziani), 1909, A., i, 965.
*p*-**Tolualdehyde-1:2:4-**, **-1:3:5-**, **-1:3:4-**, and **1:4:5-xylylhydrazone** (Padoa and Graziani), 1910, A., i, 510, 778.
*p*-**Tolualdoxime** peroxide (Ponzio), 1906, A., i, 735; (Tschugaeff and Spiro), 1908, A., i, 687.
**Tolualdoximes** (Scholl and Kačer), 1903, A., i, 254.
*m*-**Toluamide**, 6-nitro- (Wheeler and Hoffman), 1910, A., i, 666.
**Toluamides**, *o*- and *m*- (Kattwinkel and Wolffenstein), 1904, A., i, 896.
*p*-**Toluanilide**, benzoyl derivative (Freundler), 1904, A., i, 34.
**Tolu*tri*bromoresazine** (Heiduschka and Scheller), 1910, A., i, 397.
**Toluene**, benzene, and acetone, dispersion in the electric spectra of (Colley), 1908, A., ii, 909.
  ultra-violet absorption spectrum of (Cremer), 1912, A., ii, 405.

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**Toluene**, molecular weight of (Leduc), 1909, A., ii, 382.
  melting point of solid (Archibald and McIntosh), 1904, A., i, 362.
  latent heat of evaporation of (Brown), 1905, T., 267; P., 75.
  vapour pressure of (Barker), 1910, A., ii, 185.
  and benzene, vapour pressures and boiling points of mixtures of (Young and Fortey), 1903, T., 58.
  and ethylbenzene, vapour pressures and boiling points of mixtures of (Young and Fortey), 1903, T., 52.
  bromination of (Holleman and van der Laan), 1906, A., i, 154; (van der Laan), 1906, A., i, 490; (Holleman, Polak, van der Laan, and Euwes), 1909, A., i, 93.
  chemical dynamics of the bromination of (Bruner and Dluska), 1908, A., i, 146.
  chlorination of (Cohen, Dawson, Blockley, and Woodmansey), 1910, T., 1623; P., 205.
  nitration of (Holleman), 1909, A., i, 17.
  electrolytic oxidation of (Law and Perkin), 1905, A., i, 40.
  direct oxidation of, by catalysis (Woog), 1907, A., i, 753.
  sulphonation of (Holleman, Caland, van der Linden, and Wibaut), 1911, A., i, 849.
  action of acetylene tetrabromide and aluminium chloride on (Lavaux), 1905, A., i, 640.
  condensation of, with benzaldehyde (Kliegl), 1905, A., i, 186.
  action of chlorine on boiling (Cohen, Dawson, and Crosland), 1905, T., 1034; P., 211.
  condensation of, with diphenic anhydride (Pick), 1905, A., i, 68.
  action of methylene chloride and aluminium chloride on (Lavaux), 1905, A., i, 43.
  reaction of, with ethyl diazoacetate (Buchner and Feldmann), 1904, A., i, 57.
  simultaneous production of 1:6- and 2:7-dimethylanthracenes in the action of methylene dichloride, chloroform, or acetylene tetrabromide on, in presence of aluminium chloride (Lavaux), 1908, A., i, 151, 256.
  action of sulphur on (Aronstein and van Nierop), 1903, A., i, 158, 329.

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**Toluene**, action of sulphur monochloride on (Böeseken and Koning), 1911, A., i, 532.
  influence of, on zymases and phosphatese (v. Euler and Johansson), 1912, A., i, 817.
  compounds of, with hydrogen bromide and with chlorine (Maass and McIntosh), 1912, A., i, 825.
  aluminium bromide, electrolysis of (Neminsky and Plotnikoff), 1908, A., i, 407.
  chloro- and bromo-derivatives, absorption spectra of (Purvis), 1911, T., 1699; P., 218.
  chloronitro- and nitro-derivatives, rate of oxidation of (Cohen and Hodsman), 1907, T., 970; P., 152.
  halogen derivatives, oxidation of the (Cohen and Miller), 1904, T., 1622; P., 219.
  iodo-derivatives, absorption spectra of (Purvis), 1911, T., 2318; P., 280.
  detection and estimation of, in benzene (Raikow and Ürkewitsch), 1906, A., ii, 310.

**Toluene, amino-**. See Toluidines.
  *di*amino-. See Tolylenediamines.
  2:4:5-*tri*amino-, brown sulphur dye from (Kalle & Co.), 1905, A., i, 540.
  2-amino-4:5-*di*thiol-, and its diethyl ether and their salts, and sulphineazo-dyes (Fichter, Fröhlich, and Jalon), 1907, A., i, 1030.
    acetate, *N*-diacetyl derivative (Fröhlich), 1907, A., i, 632.
  *p*-bromo-, equilibrium curves in the system: *p*-dibromobenzene and (Borodowsky and Bogojawlenski), 1904, A., ii, 550.
  *o*-, *m*-, and *p*-bromo- and -chloro-, behaviour of, in the organism (Hildebrandt), 1903, A., ii, 228.
  isomeric *tri*bromo-, crystallographic and molecular symmetry of the (Jaeger), 1904, A., i, 304.
  *penta*bromo- (Klages and Sommer), 1906, A., i, 567.
  *o*-bromo-ω-nitro- (Wislicenus and Fischer), 1910, A., i, 621.
  6-bromo-2-nitro- (Friedländer, Bruckner, and Deutsch), 1912, A., i, 318.
  2-bromo-3:5-*di*nitro- and 3:5-*di*nitro-2-nitroamino-, and its salts (Zincke and Malkomesius), 1905, A., i, 487.
  4-bromo-ω-2-*di*nitro-, 4- and 6-chloro-ω-2-*di*nitro-, ω-2- and -4-*di*nitro- (Société Chimique des Usines du Rhône), 1912, A., i, 176.

(*Toluene compounds, Me* = 1.)

**Toluene**, ω-bromo*di*nitro-, ω-chloro*di*nitro-, and ω-*di*nitro- and its phenylhydrazine salt (Ponzio and Charrier), 1908, A., i, 522.
  3:5-*di*bromo-2- and -4-nitro-, and 3:5-*di*bromo-2:6-*di*nitro- (Blanksma), 1909, A., i, 778.
  *di*-ω-bromo-ω-nitro- (Ponzio), 1908, A., i, 869.
  3:5-*di*bromo-2:4-*di*nitro-, and 2:4-*di*nitro-3:5-*di*amino- (Blanksma), 1904, A., i, 566.
  ω-bromonitrocyano- (Flürscheim), 1903, A., i, 79.
  *o*-chloro-, preparation of (Gesellschaft für Chemische Industrie in Basel), 1903, A., i, 331.
  *p*-chloro-, nitration of (Holleman), 1909, A., i, 18.
  *o*-, *m*-, and *p*-chloro-, absorption spectra of (Baly), 1911, T., 856; P., 72.
  *o*-, *m*-, and *p*-chloro- and -nitro-, oxidation of (Law and Perkin), 1908, T., 1634; P., 195.
  isomeric *mono*- and *di*-chloro-, oxidation of (Cohen and Miller), 1904, T., 174; P., 11.
  isomeric *tri*chloro-, chlorination of, in presence of the aluminium-mercury couple (Cohen and Dakin), 1904, T., 1274; P., 180.
  isomeric *tetra*chloro-, constitution of, and their nitro-derivatives (Cohen and Dakin), 1904, T., 1274; P., 180.
  2:3:4:5-*tetra*chloro-, properties of (Cohen and Dakin), 1906, T., 1453; P., 241.
  6-chloro-3-hydroxy-, and 4-chloro-2:3:5-*tri*hydroxy- (Henrich, Taubert, and Birkner), 1912, A., i, 185.
  2:3:5-*tri*chloro-4:6-*di*hydroxy-, and its diacetate (Zincke, Schneider, and Emmerich), 1903, A., i, 759.
  2-chloro-3-nitro-, preparation of (Holleman), 1909, A., i, 93.
  2-chloro-3:5-*di*nitro-, preparation of (Borsche and Fiedler), 1912, A., i, 175.
  3-chloro-4:6-*di*- and -2:4:6-*tri*-nitro- (Reverdin, Dresel, and Delétra), 1904, A., i, 580.
  3:5-*di*chloro-2:4:6-*tri*nitro- (Jackson and Smith), 1904, A., i, 802.
  ω-chloro-ω-nitro-ω-cyano- (Wislicenus and Schäfer), 1909, A., i, 100.
  2:4-*di*cyano- (Borsche), 1912, A., i, 181.

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**Toluene**, 4-cyano-2-hydroxy-, and its 3:5-dinitro-derivative (Borsche and Böcker), 1904, A., i, 166.
- *o*-, *m*-, and *p*-fluoro- (Holleman), 1906, A., i, 942.
- 2:4-*di*hydroxy-. See Cresorcinol.
- 2:6-*di*hydroxy-, and its benzoyl derivative (Herzig, Wenzel, and Haiser), 1904, A., i, 247.
- 3:5-*di*hydroxy-. See Orcinol.
- *m*-iodo-, containing multivalent iodine, derivatives of (Willgerodt and Umbach), 1903, A., i, 743.
- *o*-, *m*-, and *p*-iodo-, dichlorides, action of heat on (Caldwell and Werner), 1907, T., 240 ; P., 17.
- 3:4-*di*iodo-, and its chlorination (Willgerodt and Simonis), 1906, A., i, 156.
- 3-iodo-2-nitro-, 2:5-*di*iodo-6-nitro-, and 2:3:6-*tri*iodo- (Wheeler and Brautlecht), 1910, A., i, 663.
- 5-iodo-3-nitro-, 4:5-*di*iodo-3-nitro-, and 3:4:6-*tri*iodo- (Wheeler and Scholes), 1910, A., i, 663.
- 2:3-, 2:5-, and 3:5-*di*iodo-, 3:4:5-*tri*iodo-, and 2-iodo-3-nitro- (Wheeler and Liddle), 1910, A., i, 18.
- 2:3:4:6-*tetra*iodo- (Wheeler and Hoffman), 1910, A., i, 663.
- 2-iodo-4-nitro-, derivatives of, with multivalent iodine (Willgerodt and Kok), 1908, A., i, 620.
- 3-iodo-6-nitro- and 6-iodo-3-nitro- (Artmann), 1905, A., i, 879.
- 2:3-*di*iodo-5-nitro-, 2:3:4-, and 3:5:6-*tri*iodo-, 3:4:5:6-*tetra*iodo-, and *penta*iodo- (Wheeler and Hoffman), 1911, A., i, 28.
- 2:5-*di*iodo-3- and 4-nitro-, 2:4:6-*tri*iodo-, and 2:3:5:6-*tetra*iodo- (Wheeler and Brautlecht), 1911, A., i, 27.
- *m*-iodoso and *m*-iodoxy- (Willgerodt and Umbach), 1903, A., i, 743.
  - fluoride (Weinland and Stille), 1903, A., i, 748.
- *m*- and *p*-iodoxy-, compounds of, with mercuric bromide and chloride, and *p*-nitro-compound of, with mercuric chloride (Mascarelli), 1905, A., i, 869.
- *o*-, *m*-, and *p*-iodoxy-, molecular weights of, in formic acid (Mascarelli and Martinelli), 1907, A., ii, 228.
- nitro-, detection and estimation of, in nitrobenzene (Raikow and Urkewitsch), 1906, A., ii, 310.
- *p*-nitro-, formation of, from 2:4-dinitrotoluene (Kohn), 1910, A., i, 660.

(*Toluene compounds, Me* = 1.)

**Toluene**, *o*-nitro-, purification of (Farbwerke vorm. Meister, Lucius, & Brüning), 1905, A., i, 639.
- two modifications of (v. Ostromisslensky), 1907, A., i, 120 ; (Knoevenagel), 1907, A., i, 202.
- oxidation of (Lauth), 1904, A., i, 233.
- oxidation of, in the side-chain with manganese dioxide and sulphuric acid (Badische Anilin- & Soda-Fabrik), 1907, A., i, 407.
- compound of, with aluminium chloride (Walker and Spencer), 1904, T., 1108 ; P., 135.
- mercury derivatives of (Reissert), 1907, A., i, 908.
- dimercury compound of, and its sulphates and mercury dinitrite (Kalle & Co.), 1909, A., i, 76.
- examination of, for the presence of small quantities of *p*-nitrotoluene (Holleman and Jungius), 1905, A., ii, 864.
- and *o*-toluidine, estimation of impurities in (Holleman), 1909, A., ii, 192.

*m*-nitro-, iodo-, iodoso-, and iodoxy-compounds of, and their salts (Willgerodt and Simonis), 1906, A., i, 155.

*p*-nitro-, electrolytic reduction of (Goecke), 1903, A., i, 615.
- kinetics of the sulphonation of (Martinsen), 1908, A., ii, 572.
- and its derivatives, action of caustic alkalis on (Green, Davies, and Horsfall), 1907, T., 2076 ; P., 289.
- action of caustic alkalis on derivatives of (Green and Baddiley), 1908, T., 1721 ; P., 201.
- volumetric estimation of, in crude nitrotoluene (Glasmann), 1904, A., ii, 151.

*o*- and *p*-nitro-, specific gravity of solutions of (Hyde), 1912, A., ii, 1138.
- mercury compounds from (Reissert), 1907, A., i, 1103.

*m*- and *p*-nitro-, influence of the cathode material on the reduction of (Löb and Schmitt), 1904, A., i, 986.

ω-nitro- (*phenylnitromethane*), preparation of (Neogi and Adhicáry), 1911, A., i, 120.
- spontaneous decomposition of (Dimroth), 1910, A., i, 831 ; (Heim), 1911, A., i, 28.

(*Toluene compounds, Me* = 1.)

**Toluene**, ω-nitro-, transformation of, into the ω-dinitro-compound (Ponzio), 1908, A., i, 869.
  condensation of, with benzaldehyde (Heim), 1911, A., i, 717.
 ω-*iso*nitro-, velocity of transformation of (Patterson and McMillan), 1908, T., 1048 ; P., 135.
  silver salt (Angeli, Castellana, and Ferrero), 1909, A., i, 739.
 2:3-, 3:4-, and 3:6-*di*nitro-, preparation and separation of (Holleman and Sirks), 1907, A., i, 131.
 2:4- and 2:6-*di*nitro-, partial reduction of, by electrolytic methods (Brand and Zöller), 1907, A., i, 755.
 2:6-*di*nitro-, reduction of, by hydrogen sulphide (Cohen and Marshall), 1904, T., 527 ; P., 63.
 ω-*di*nitro-, action of diazo-salts on (Ponzio), 1908, A., i, 482.
  and *o*-, *m*-, and *p*-ω-*di*nitro-, coloured salts from (Hantzsch), 1907, A., i, 501.
  *p*-bromodiazobenzene salt of (Ponzio), 1909, A., i, 338.
  *o*- and *p*-diazotoluene, *o*- and *p*-chlorodiazobenzene, and *o*-bromodiazobenzene derivatives of (Ponzio and Charrier), 1909, A., i, 444.
 ω-2-*di*nitro-, preparation of (Société Chimique des Usines du Rhône), 1912, A., i, 756.
 *s*-*tri*nitro-, additive compound of isoapiole and, crystallography of (Boeris), 1911, A., i, 290.
  additive compounds of, with arylamines (Sudborough and Beard), 1910, T., 773 ; P., 71.
  compounds of, with benzaldehydephenylhydrazones (Ciusa and Vecchiotti), 1912, A., i, 33.
  additive compounds of, with 2-methylindole, 2:3-dimethylindole carbazole and phenylindole (Ciusa and Vecchiotti), 1912, A., i, 755.
  additive compounds of phenolic ethers with (Sudborough and Beard), 1911, T., 215 ; P., 5.
  compound of, with *p*-toluidine (Jackson and Clarke), 1906, P., 84.
 *p*-nitro-*o*-cyano-, action of caustic alkalis and air on (Green, Davies, and Horsfall), 1907, T., 2082.
 2:4- and 2:6-nitrohydroxylamino-, and 2:4- and 2:6-nitronitroso- (Brand and Zoller), 1907, A., i, 755.

(*Toluene compounds, Me* = 1.)

**Toluene**, 2-nitro-6-hydroxylamino-, new forms of (Brand), 1911, A., i, 714.
 3-nitro-4-nitroso- (Bamberger and Hübner), 1904, A., i, 117.
 3:5-*di*nitro-4-nitroamino-, and its silver salt (Zincke and Kuchenbecker), 1905, A., i, 488.
**Toluenes**, nitro-, xylenes and toluidines freezing mixtures of (Fischer), 1910, A., i, 309.
 *p*-nitro-, ring-substituted, action of sodium disulphide on (Blanksma), 1909, A., i, 936.
*p*-**Tolueneazoacethydrazide** (Dimroth and de Montmollin), 1910, A., i, 899.
*p*-**Tolueneazo-β-amino-8-nitronaphthalene** (Smith), 1906, T., 1509 ; P., 236.
*p*-**Tolueneazo-*p*-benzaldehyde** and -*p*-**benzylidene-*p*-toluidine** (Alway), 1903, A., i, 707.
**Toluene-*o*-azobenzoic acid** (Chemische Fabrik vorm. Weiler-Ter-Meer), 1904, A., i, 53.
4-*p*-**Tolueneazo-1-benzoyl-3-methyl-5-pyrazolone** (Curtius and Schneiders), 1912, A., i, 138.
4-*p*-**Tolueneazo-2-bromo-6-nitrophenol,** preparation of, and its acetyl and benzoyl derivatives (Hewitt and Walker), 1906, T., 185 ; P., 16.
**Tolueneazocarbanilides**, *o*- and *p*- (Busch and Frey), 1903, A., i, 538.
*p*-**Toluene-2-azo-5-chlorobenzoic acid** (Freundler and Sevestre), 1909, A., i, 69 ; (Freundler), 1911, A., i, 758.
4-**Tolueneazo-*m*-cresol** (McPherson and Boord), 1911, A., i, 818.
*p*-**Tolueneazodiacetylhydrazine** (Dimroth and de Montmollin), 1910, A., i, 899.
*p*-**Tolueneazodiethylaniline** and its additive salts (Gnehm and Bauer), 1905, A., i, 831.
**Tolueneazodimethylaniline** and dibromo-, coloured salts of (Hantzsch and Hilscher), 1908, A., i, 485.
**Tolueneazodimethyldiphenyls**, *o*- and *p*- (Ehrenpreis), 1907, A., i, 453.
*p*-**Tolueneazo-ββ-dinaphthylamine** (Fischer and Straus), 1908, A., i, 222.
4-**Tolueneazo-1:3-diphenyl-5-pyrazolone-2′-carboxylic acid** (Michaelis and Leo), 1910, A., i, 516.
**Tolueneazoeugenols**, *o*-, *m*-, and *p*-, and their acetyl derivatives and ethyl ethers (Oddo and Puxeddu), 1906, A., i, 992.

(*Toluene compounds*, *Me* = 1.)

**Tolueneazo*iso*eugenols**, *o*- and *m*- (Puxeddu), 1906, A., i, 774.

*o*-**Tolueneazoeugenyl** ethyl ether (Auwers), 1908, A., i, 229.

**3-*o*-Tolueneazoglutacononic acid**, ethyl ester, *o*-tolylhydrazone (Henrich, Reichenburg, Nachtigall, Thomas, and Baum), 1910, A., i, 901.

**3-*p*-Tolueneazoglutacononic acid**, ethyl ester, *p*-tolylhydrazone (Henrich, Reichenburg, Nachtigall, Thomas, and Baum), 1910, A., i, 901.

*o*-**Tolueneazoguaiacol** and its acetyl derivative (Colombano and Leonardi), 1908, A., i, 68.

**Tolueneazo-*m*-hydroxybenzoic acids**, *o*- and *p*-, and their reduction (Puxeddu), 1906, A., i, 995.

**Tolueneazo-*p*-hydroxybenzoic acids**, *o*- and *p*-, and their acetyl derivatives, and ethyl ester of the *o*-acid (Grandmougin and Freimann), 1908, A., i, 1024.

**4-*o*-Tolueneazo-5-hydroxy-3-methyl*iso*-oxazole** (Bülow and Hecking), 1911, A., i, 245.

**4-*o*- and -*p*-Tolueneazo-5-hydroxy-3-methylpyrazole** (Bülow and Hecking), 1911, A., i, 404.

**4-*o*-Tolueneazo-5-hydroxy-1-phenyl-3-methylpyrazole** (Bülow and Hecking), 1911, A., i, 405.

**4-*p*-Tolueneazo-5-hydroxy-1-phenylpyrazole-3-acetic acid** and its ethyl ester (Bülow and Göller), 1911, A., i, 1043.

**5-*p*-Tolueneazo-8-hydroxyquinoline** and its derivatives (Fox), 1910, T., 1341.

**Tolueneazo-2-** and **-3-hydroxy-3-** and **-4-toluic acids**, 5- and 6-*o*- and -*p*- (Puxeddu and Maccioni), 1907, A., i, 798.

**Toluene-4-azo-5-hydroxy-1:2:3-triazole** (Dimroth and Aickelin), 1907, A., i, 160.

**4-Tolueneazo-5-hydroxy-1:2:3-triazole-1-acetylbenzylidenehydrazide** (Curtius and Callan), 1910, A., i, 788.

**4-Tolueneazo-5-hydroxy-1:2:3-triazole-1-acetylglycinebenzylidenehydrazide** (Curtius and Callan), 1910, A., i, 788.

*o*-**Tolueneazoindazole** and its acetyl and benzoyl derivative (Grandmougin and Freimann), 1908, A., i, 1024.

**4-Tolueneazo-3-methyl-5-pyrazolones**, *o*- and *p*-, and their 1-benzoyl derivatives (Bülow and Schaub), 1908, A., i, 705.

**2-*p*-Tolueneazo-α-naphthol** (*β-naphthaquinone*-p-*tolylhydrazone*), acetyl derivative of (Noelting, Grandmougin, and Freimann), 1909, A., i, 442.

(*Toluene compounds*, *Me* = 1.)

*m*-**Tolueneazo-β-naphthol** (v. Niementowski), 1903, A., i, 133; (Norman), 1912, T., 1921.

*m*-**Tolueneazo-β-naphthol**, ω-hydroxy- (Langguth), 1905, A., i, 593.

*p*-**Tolueneazo-β-naphthol**, 3:5-*di*bromo- (Orton), 1903, T., 812; P., 162.
3-chloro-5-bromo- (Orton and Reed), 1907, T., 1571.

**Toluene-azo-β-naphthols**, chloro-, the orientation of sulphonated, and their lake-forming properties (Badische Anilin- & Soda-Fabrik), 1907, A., i, 263.

*o*- and *m*-**Tolueneazo-β-naphthols**, bromo- (Gebhard and Thompson), 1909, T., 1120.

**1-*o*- and -*p*-Tolueneazo-2-naphthyl** methyl ethers and their hydrochlorides (Charrier and Ferreri), 1912, A., i, 813.

*p*-**Tolueneazo-β-naphthylamine** (Charrier), 1910, A., i, 287.

*o*-, *m*-, and *p*-**Tolueneazo-β-naphthylamines** and their derivatives (Norman), 1912, T., 1918; P., 232.

**Toluene-2-azo-β-naphthylamine-4:5-disulphide** (Fichter, Fröhlich, and Jalon), 1907, A., i, 1031.

**Tolueneazo-7-nitroindazole**, 3-nitro- and its polymeride (Noelting), 1904, A., i, 690.

ω-*o*- and -*p*-**Tolueneazo-ω-*di*nitrotoluene** (Ponzio and Charrier), 1909, A., i, 444.

*p*-**Tolueneazo-orcinol**, 3:5-*di*bromo- (Orton and Everatt), 1908, T., 1020.

**Toluene-*o*-azophenetole**, reduction of (Jacobson, Franz, and Zaar), 1904, A., i, 121.

*p*-**Tolueneazo-*o*-phenetole** (Jacobson and Huber), 1909, A., i, 852.

*o*-**Tolueneazophenol** and its acetyl derivative and benzenesulphonyl ester (Grandmougin and Freimann), 1908, A., i, 1023.

*p*-**Tolueneazophenol**, *o*- and *m*-nitro-, and the acetyl compound of the *m*-nitro- (Hewitt and Mitchell), 1905, T., 231; P., 61.

**Tolueneazophenyl** benzoate (Hantzsch and Glover), 1907, A., i, 101.

*p*-**Toluene-4-azo-1-phenyl-3-methyl-5-pyrazolone** (Lapworth), 1903, T., 1124; P., 149.

**4-*o*- and -*p*-Tolueneazo-3-phenyl*iso*oxazolone**, and *o*- and *m*-nitro-derivatives of the *p*-compound (Meyer), 1911, A., i, 341.

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*m*-**Toluene-4-azoresorcinol,** 2:4:6-*tri*bromo- (Orton and Everatt), 1908, T., 1018.

*p*-**Toluene-4-azoresorcinol,** 3:5-*di*bromo- (Orton and Everatt), 1908, T., 1018.

*o*-**Tolueneazosalicylic acid** and its acetyl derivative (Grandmougin, Guisan, and Freimann), 1907, A., i, 987.

*p*-**Tolueneazosalicylic acid** and *o*-nitro-, and their acetyl derivatives (Grandmougin and Guisan), 1907, A., i, 1092.

**Tolueneazosalicylic acids,** *o*-, *m*-, and *p*-, and their nitro- and acetyl derivatives (Grandmougin and Guisan), 1908, A., i, 927.

*o*-**Tolueneazo-*o*-tolueneazodimethylaniline** and its hydrochloride (Hewitt and Thole), 1909, T., 1396; P., 208.

2-*p*-**Tolueneazo-*m*-toluic acid** (Freundler and Sevestre), 1909, A., i, 69; (Freundler), 1911, A., i, 758.

*p*-**Tolueneazo-*o*-toluidine,** coloured salts of (Hantzsch and Hilscher), 1908, A., i, 485.

**Tolueneazo-*p*-tolyl** acetates, 3-*o*- and 3-*m*-, and their *O*-acetylhydrazo-derivatives (Auwers, Hirt, and v. der Heyden), 1909, A., i, 438.

4-**Tolueneazo-*m*-tolyl** benzoate (McPherson and Boord), 1911, A., i, 818.

*p*-**Tolueneazo-*p*-tolyl** propionate and its hydrazo-derivative (Auwers, Hirt, and Müller), 1909, A., i, 223.

**Toluene-*o*-azo-*o*-tolyl-** and **Toluene-*p*-azo-*p*-tolyl-phenylamine-*o*-carboxylic acids** (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 353.

5-*o*-**Tolueneazo-1-*o*-tolyl-6-pyridazone-3-carboxylic acid,** ethyl ester (Henrich, Reichenburg, Nachtigall, Thomas, and Baum), 1910, A., i, 901.

**Toluene-4-azo-5-triazolone** and its 1-**acetic acid** and its amide (Curtius and Thompson), 1907, A., i, 95.

*o*-**Toluene-*o*-azoxybenzoic acid,** ω-hydroxy- (Bamberger and Remmert), 1907, A., i, 164.

*p*-**Tolueneazo-4-*m*-xylenol** and its ethyl ether (Jacobson and Fulda), 1909, A., i, 853.

**Tolueneazo-.** See also Tolylazo-.

*o*-**Toluenebisazo-β-naphthol,** *di*- and *tri*thio- (Hodgson), 1912, T., 1699; P., 222.

*p*-**Toluene-β-diazoaminonaphthalene-8-sulphonic acid,** sodium salt (Smith), 1906, T., 1506; P., 236.

(*Toluene compounds, Me* = 1.)

*p*-**Toluenediazobis-4-dimethylaminobenzaldoxime** (Bresler, Friedemann, and Mai), 1906, A., i, 322.

**Toluenediazoimide,** 3:5-*di*nitro- (Zincke and Malkomesius), 1905, A., i, 487.

**Toluenediazonium** bromides, *o*- and *p*-, preparation of (Chattaway), 1908, T., 960.

  chlorides, *o*-, *m*-, and *p*-, action of potassium ferrocyanide on (Ehrenpreis), 1907, A., i, 453.

*o*-**Toluenediazonium,** 3:5-*di*nitro-, nitrate of, and its β-naphthylamine derivative, and perbromide (Zincke and Malkomesius), 1905, A., i, 487.

*m*-**Toluenediazonium** chloride and sulphate, action of sulphur dioxide on (Tröger, Hille, and Vasterling), 1906, A., i, 120; (Tröger and Schaub: Tröger, Warnecke, and Schaub), 1906, A., i, 993.

*p*-**Toluenediazonium** hydroxide, action of ethyl alcohol on (Roberts and Alleman), 1911, A., i, 369.

  sulphate (Alleman), 1904, A., i, 202.

*p*-**Toluenediazonium,** 3-chloro-5-bromo-, hydrogen carbonate and hydrogen sulphate, replacement of halogen by hydroxyl in (Orton and Reed), 1907, T., 1570; P., 212.

*o*- and *p*-**Toluenediazonium** chlorides, compounds of, with antimony trichloride (May), 1912, T., 1038.

*p*-**Toluenediazo-ψ-semicarbazinocamphor** and its decomposition by alkali (Forster), 1906, T., 235; P., 31.

**Toluene-*p*-diazotrimethyl-4:6-*di*amino-*m*-xylene** (Morgan and Micklethwait), 1907, T., 370.

**Toluene-3:5-dicarboxylic acid.** See Uvitic acid.

**Toluene-2:4-disulphinic acid** and its salts and methyl ester (Tröger and Meine), 1904, A., i, 31.

**Toluene-2:4-disulphonic acid** and its bromide and chloride (Tröger and Meine), 1904, A., i, 31.

**Toluene-*o*-hydrazobenzoic acid** (Chemische Fabrik vorm. Weiler-Ter-Meer), 1904, A., i, 53.

**Toluene-*o*- and -*p*-hydrazo-*m*- and -*p*-cresotoles** (Jacobson and Hugershoff), 1904, A., i, 107.

*p*-**Toluenehydrazoeugenyl** acetate (Auwers), 1908, A., i, 228.

*o*-**Toluenesulphanilide** (Ullmann and Lehner), 1905, A., i, 290.

*m*-**Toluenesulphinic acid** and its salts (Tröger and Hille), 1905, A., i, 336.

(*Toluene compounds*, *Me* = 1.)

- *p*-**Toluenesulphinic acid** (Heiduschka), 1909, A., i, 144.
  - preparation of (Knoevenagel and Kenner), 1908, A., i, 971.
  - derivatives of (v. Meyer), 1903, A., i, 808.
  - alkaloidal salts, and their rotatory power (Hilditch), 1908, T., 1621.
  - mercuric salt (Peters), 1905, A., i, 640.
- **Toluene-ω-sulphinic acid** (*benzylsulphinic acid*) and its salts (Fromm and de Seixas Palma), 1906, A., i, 819.
- **Toluenesulphinic acids**, *o*- and *p*-, ferric salts, reactions of (Thomas), 1909, T., 343.
- **Toluene-*p*-sulphinic anhydride**, preparation of (Knoevenagel and Polack), 1908, A., i, 971.
- *p*-**Toluenesulphinyl** chloride (Hilditch and Smiles), 1909, A., i, 19.
- **Toluene-2-sulpho-alanine, -glycine**, and **-glutamic acid**, 4-nitro- (Siegfried), 1905, A., i, 59.
- **Toluene-*p*-sulphonalkylamides** and 2-nitro- (Chattaway), 1905, T., 159.
- **Toluenesulphonamides**, fusion of, with 1-phenyl- or 1-*p*-tolyl-2:3-dimethyl-5-pyrazolone (Voswinkel), 1911, A., i, 498.
- **Toluene-*o*- and -*p*-sulphonamides**, separation of (Barge and Givaudan), 1905, A., i, 124.
- **Toluene-2-sulphonanilide**, 4-nitro- (Ullmann and Gschwind), 1908, A., i, 623.
- *p*-**Toluenesulphonarylchloroamides** (Chattaway), 1904, T., 1181; P., 168.
- *p*-**Toluenesulphonchloromethylamide** (Chattaway), 1904, P., 208.
- **Toluenesulphonic acid**, *p*-fluoro-, amide and chloride of (Holleman), 1906, A., i, 942.
- *o*-**Toluenesulphonic acid**, 4-methylamino- and 2:3-dinitro-4-methylamino-phenyl esters (Reverdin and de Luc), 1909, A., i, 377.
- *o*-**Toluenesulphonic acid**, 4-nitro-, cerous salt (Morgan and Cahen), 1907, A., i, 1021.
- *m*-**Toluenesulphonic acid**, ω-*di*chloro-, and its chloride and sodium salt (Badische Anilin- & Soda-Fabrik), 1912, A., i, 176.
  - 6-nitro-4-thiol, and its dipotassium salt and disulphide and its derivatives (Fichter, Fröhlich, and Jalon), 1907, A., i, 1031.

(*Toluene compounds*, *Me* = 1.)

- *p*-**Toluenesulphonic acid**, electrolytic oxidation of (Sebor), 1903, A., i, 554.
  - alkaloidal salts, and their rotatory power (Hilditch), 1908, T., 1621.
  - esters, as alkylating agents (Ullmann and Wenner), 1903, A., i, 407.
  - 2:4-diaminophenyl ester and its diacetyl derivative, 2:4-dinitrophenyl ester, 2:4-dinitrophenylpyridinium ester, and 3:5-dinitrotolyl ester (Ullmann and Nádai), 1908, A., i, 526.
  - 2-amino-*p*-tolyl ester and sodium sulphobenzene-5-azo-2-amino-*p*-tolyl ester (Anilinfarben- & Extraktfabriken vorm. Geigy & Co.), 1908, A., i, 1022.
  - bornyl and ethylpyridinium esters (Ferns and Lapworth), 1912, T., 276.
  - 4-chloro-2:6-dinitrophenyl and 3:5-dinitro-*o*-tolyl esters (Ullmann and Sané), 1912, A., i, 104.
  - *o*-hydroxylaminophenyl, *o*-nitrosohydroxylaminophenyl, and *o*-nitrosophenyl esters of (Baudisch and Karzeff), 1912, A., i, 442.
  - α-naphthyl ester (Aktien-Gesellschaft für Anilin-Fabrikation), 1912, A., i, 183.
  - 2:4-dinitro-α-naphthyl and 2:4-dinitro-α-naphthylpyridinium esters (Ullmann and Bruck), 1909, A., i, 21.
  - 3:5-dinitro-*p*-tolyl ester (Ullmann), 1908, A., i, 626.
  - 2:4:6-trinitro-3-hydroxyphenyl ester, diethylaniline salt (Ullmann and Bruck), 1909, A., i, 23.
  - 2:5-diphenylphenyl ester (Fichter and Walter), 1910, A., i, 29.
- *p*-**Toluenesulphonic acid**, ω-chloro- (Badische Anilin- & Soda-Fabrik), 1912, A., i, 176.
  - ω-2-*di*chloro-, ethyl ester (Badische Anilin- & Soda-Fabrik), 1912, A., i, 176.
  - 2-nitro-, 5-nitro-*o*-tolyl ester (Reverdin), 1912, A., i, 436.
- **Toluene-ω-sulphonic acid** (*benzylsulphonic acid*), compounds of, with amino-carboxylic esters (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 413.
  - anilide, *o*-phenetidide, and *p*-toluidide of (Fromm and de Seixas Palma), 1906, A., i, 819.

(*Toluene compounds, Me* = 1.)

**Toluene-ω-sulphonic acid,** 3-amino-6-hydroxy-, and 3-nitro-6-hydroxy- (Farbenfabriken vorm. F. Bayer & Co.), 1904, A., i, 579.

*o*-chloro-*m*-nitro-, and its sodium salt (Farbwerke vorm. Meister, Lucius, & Brüning), 1905, A., i, 124.

2-chloro-5-nitro-, and 5-nitro-2-amino-, and their salts (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 662.

chloro*di*nitro-, and its calcium salt (Kalle & Co.), 1903, A., i, 616.

*o*-, *m*-, and *p*-nitro-, electrolytic reduction of (Weiss and Reiter), 1907, A., i, 841.

nitroaminohydroxy-, and its salts and diazonium compound (Kalle & Co.), 1903, A., i, 616.

**Toluene-ω-sulphonic acids,** chlorinated, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 390.

***p*-Toluenesulphon-*m*-iodo-anilide** and **-methylanilide** (Ullmann), 1904, A., i, 727.

***o*-Toluenesulphonmethylamide** (Remsen and Clark), 1903, A., i, 823.

***p*-Toluenesulphonmethyl-*p*-nitroanilide** (Aktien-Gesellschaft für Anilin-Fabrikation), 1910, A., i, 727.

***p*-Toluenesulphon-*o*-toluidide** (Chattaway), 1904, T., 1186.

***o*-Toluenesulphonyl bromide** and **chloride,** preparation of (Ullmann and Lehner), 1905, A., i, 289.

***p*-Toluenesulphonyl bromide** and 3-bromo-, chloride (Zincke and Frohneberg), 1910, A., i, 315.

**Toluene-ω-sulphonyl bromide** (Fromm and Gaupp), 1908, A., i, 970.

***p*-Toluenesulphonyl chloride,** electrolytic reduction of (Fichter and Bernoulli), 1907, A., i, 690.

action of arsenites on (Gutmann), 1909, A., i, 144.

action of, on thiocarbamide (Fromm and Heyder), 1909, A., i, 903.

***p*-Toluenesulphonyl chloride,** *o*-chloro- (Gesellschaft für Chemische Industrie in Basel), 1903, A., i, 331.

2:6-*di*chloro-, and 2:3:6-*tri*chloro- (Anilin-farben & Extrakt-Fabriken vorm. Geigy & Co.), 1909, A., i, 706.

2-nitro-, electrolytic reduction of (Fichter and Bernoulli), 1910, A., i, 20.

(*Toluene compounds, Me* = 1.)

**Toluene-ω-sulphonyl chloride,** *o*-chloro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1911, A., i, 445.

**Toluene-*m*- and -*p*-sulphonyl chlorides,** ω-chloro-, ω-2-*di*chloro-, and ω-6-*di*chloro- (Badische Anilin- & Soda-Fabrik), 1911, A., i, 850.

***o*-Toluenesulphonylacetic acid** and its silver salt (Friedländer and Chwala), 1907, A., i, 526.

**Toluenesulphonylacetic acids,** amides, nitriles, and thioamides of, and the chloro- and bromo-derivatives of the para-amide (Tröger and Hille), 1905, A., i, 336.

**Toluene-*p*-sulphonylalanine** (Pope and Gibson), 1912, T., 945.

***p*-Toluenesulphonyl-allylamine, -allylisobutylamine,** and **-*iso*butylamine** (Wedekind and Oberheide), 1909, A., i, 904.

**Toluenesulphonylamino-.** See also under the parent Substance.

**1- and 2-*p*-Toluenesulphonylaminoanthraquinones** (Ullmann), 1910, A., i, 751.

**4-*p*-Toluenesulphonylaminoanthraquinone-2:1-acridone** (Ullmann and Billig), 1911, A., i, 491.

**Toluene-*p*-sulphonylaminobenzeneazo-β-naphthol** (Morgan and Micklethwait), 1905, T., 1305.

**Toluene-ω-sulphonyl-*p*-aminobenzeneazo-β-naphthol** (Morgan and Pickard), 1910, T., 57.

***p*-Toluenesulphonyl-*o*-amino-benzoic acid** and **-benzophenone** (Ullmann and Bleier), 1903, A., i, 176.

***p*-Toluenesulphonyl-2-amino-2′:4′-, 2′:5′-, and -3′:4′-dimethoxybenzophenones** (Ullmann and Denzler), 1907, A., i, 142.

***p*-Toluenesulphonyl-2-amino-4′-methoxybenzophenone** (Ullmann and Bleier), 1903, A., i, 176.

**2-Toluene-*p*-sulphonyl-1:2:6-*tri*aminonaphthalene** (Morgan and Micklethwait), 1912, T., 150.

***p*-Toluenesulphonyl-2-aminophenyl α- and β-methoxynaphthyl ketones** (Ullmann and Denzler), 1907, A., i, 143.

**4-*p*-Toluenesulphonylamino-*N*-phenylpyridazonanthrone** (Ullmann and Minajeff), 1912, A., i, 389.

***p*-Toluenesulphonyl-*o*-aminophenyl *p*-tolyl ketone** (Ullmann and Bleier), 1903, A., i, 176.

**2-*p*-Toluenesulphonyl-aminotoluene-** and **-methylaminotoluene-5-azo-β-naphthols** (Morgan and Micklethwait), 1906, A., i, 911.

(*Toluene compounds*, $Me = 1$.)

**4-Toluenesulphonylaminotoluene,** dinitro-derivatives of (Reverdin and de Luc), 1911, A., i, 38.

*p*-**Toluenesulphonyl-2-amino-2′:3′:4′-trimethoxybenzophenone** (Ullmann and Denzler), 1907, A., i, 143.

**1-*p*-Toluenesulphonylanilinoanthraquinone** (Ullmann and Fodor), 1911, A., i, 467.

**Toluene-*p*-sulphonyl-*p*-anisidide,** *o*-nitro-, and its derivatives (Reverdin and de Luc), 1912, A., i, 182.

*p*-**Toluenesulphonylanthranilic acid,** ethyl ester, and chloride (Schroeter and Eisleb), 1909, A., i, 576.

*p*-**Toluenesulphonylaziminotoluene** (Ullmann and Gross), 1910, A., i, 886.

*p*-**Toluenesulphonyl-*p*-aziminotoluene** and -*p*-**tolylenediamine** (Morgan and Micklethwait), 1906, A., i, 911.

**Toluene-*p*-sulphonyl*iso*butylamide** (Pope and Read), 1912, T., 521.

**9-*p*-Toluenesulphonylcarbazole** (Cassella and Co.), 1910, A., i, 775.

**4-Toluene-*p*-sulphonyldiphenyliodinium** salts (Willgerodt and Plockstíes), 1912, A., i, 257.

**Toluenesulphonylethenylaminoximes,** *o*- and *p*- (Tröger and Volkmer), 1905, A., i, 356.

**Toluene-*o*-** and -*p*-**sulphonyl-halogen-** and **-alkylhalogen-amides** and 2-nitro-derivatives of the *p*-compounds (Chattaway), 1905, T., 151; P., 7.

**1-*p*-Toluenesulphonylmethylaminoanthraquinone** (Ullmann), 1911, A., i, 136; (Ullmann and Fodor), 1911, A., i, 466.

**Toluene-*p*-sulphonylmethylamino-*p*-benzene-2-azo-7-amino-α-naphthol-3-sulphonic acid,** sodium salt (Morgan and Micklethwait), 1912, T., 146.

*p*-**Toluenesulphonyl-*o*-methylaminobenzoic acid,** methyl ester, and -**benzophenone** (Ullmann and Bleier), 1903, A., i, 176.

**2-Toluene-*p*-sulphonyl-2-methyl-1:2:6-*tri*aminonaphthalene** (Morgan and Micklethwait), 1912, T., 152.

*p*-**Toluenesulphonylmethyl-3-amino-*p*-toluidide** (Ullmann and Gross), 1910, A., i, 886.

**4-Toluene-*p*-sulphonyl-4-methyl-4:6-*di*amino-*m*-xylene** and its hydrochloride and acetyl and azo-β-naphthol derivatives (Morgan and Micklethwait), 1907, T., 364.

**Toluene-*p*-sulphonylmethyl-β-naphthylamine** (Morgan and Micklethwait), 1912, T., 150.

(*Toluene compounds*, $Me = 1$.)

**2-Toluene-*p*-sulphonyl-2-methyl-1:2-naphthylenediamine** (Morgan and Micklethwait), 1912, T., 151.

**Toluene-*p*-sulphonylmethyl-*m*-** and *p*-**nitroanilines** (Morgan and Micklethwait), 1912, T., 144.

**Toluene-*p*-sulphonylmethyl-1-nitro-** and **1:6-*di*nitro-β-naphthylamine** (Morgan and Micklethwait), 1912, T., 150.

*p*-**Toluenesulphonylmethyl-3-nitro-** and **3:5-*di*nitro-*p*-toluidide** (Ullmann and Gross), 1910, A., i, 886.

*p*-**Toluenesulphonylmethyl-*p*-phenylenediamine** (Aktien-Gesellschaft für Anilin-Fabrikation), 1910, A., i, 727.

*as*-**Toluene-*p*-sulphonylmethyl-*m*-** and -*p*-**phenylenediamines** and their derivatives (Morgan and Micklethwait), 1912, T., 145.

*p*-**Toluenesulphonylmethyl-*p*-tolylenediamine** (Morgan and Micklethwait), 1906, A., i, 911.

*p*-**Toluenesulphonylnaphthastyril** (Ullmann and Cassirer), 1910, A., i, 201.

**2-Toluene-*p*-sulphonyl-1:2-naphthylenediamine** and its **-6-sulphonic acid** (Morgan and Micklethwait), 1912, T., 149.

**Toluene-*p*-sulphonyl-6-nitro-4-amino-*m*-xylene** and its *N*-methyl derivative (Morgan and Micklethwait), 1907, T., 363.

**Toluene-*p*-sulphonyl-*m*-nitroaniline** (Morgan and Micklethwait), 1906, T., 1292.

**Toluene-*p*-sulphonyl-*p*-nitroaniline** (Morgan and Micklethwait), 1905, T., 1303.

**Toluene-ω-sulphonyl-*p*-nitroaniline** (Morgan and Pickard), 1910, T., 56.

**Toluene-*p*-sulphonyl*tri*nitroanisidine** (Reverdin), 1912, A., i, 963.

**Toluene-*p*-sulphonyl-1:6-*di*nitro-β-naphthylamine** (Morgan and Micklethwait), 1911, P., 326; 1912, T., 148.

*p*-**Toluenesulphonyl-5-nitro-*o*-toluidine** and its *N*-methyl derivative (Morgan and Micklethwait), 1906, A., i, 911.

*p*-**Toluenesulphonyl-3-nitro-*p*-toluidine** (Ullmann and Gross), 1910, A., i, 886.

*p*-**Toluenesulphonyl-3:5-*di*nitro-*p*-toluidine,** nitro- (Ullmann and Gross), 1910, A., i, 886.

*p*-**Toluenesulphonyloxyanilinoacetic acid** and its ethyl ester and di- and tri-nitro-derivatives (Reverdin and de Luc), 1909, A., i, 914.

(*Toluene compounds, Me* = 1.)

1-*p*-**Toluenesulphonylphenylaminoanthraquinone** (Ullmann), 1911, A., i, 136.

**Toluene-*p*-sulphonyl-*m*-phenylenediamine** and diazotisation, and azo-β-naphthol derivative (Morgan and Micklethwait), 1906, T., 1292.

**Toluene-*p*-sulphonyl-*p*-phenylenediamine** and its derivatives (Willstätter and Pfannenstiel), 1905, A., i, 669.
  and its diazotisation (Morgan and Micklethwait), 1905, T., 1303; P., 222.

**Toluene-ω-sulphonyl-*p*-phenylenediamine** (Morgan and Pickard), 1909, P., 301; 1910, T., 56.

*as*-**Toluene-*p*-sulphonyl-*m*- and -*p*-phenylenediamines** (Morgan and Micklethwait), 1911, P., 326.

**Toluene-ω-sulphonyl-*p*-phenylenediazoimide** (Morgan and Pickard), 1909, P., 301; 1910, T., 57.

*p*-**Toluenesulphonylphenylethylamine** (Johnson and Guest), 1909, A., i, 785.

*p*-**Toluenesulphonylpropyl*iso*butylamide** preparation of (Pope and Read), 1912, T., 521.

*p*-**Toluenesulphonyltolylene-3:4-diamine** and its hydrochloride (Ullmann and Gross), 1910, A., i, 886.

**Toluene-*p*-thiosulphonic acid**, sodium salt, action of arsenites and cyanides on (Gutmann), 1908, A., i, 972.

*p*-**Toluene-β-triazoethylsulphonamide** (Forster and Newman), 1911, T., 1280; P., 154.

**Toluic acid**, amino-*m*-hydroxy- (*amino*-m-*cresotic acid*) hydrochloride (Puxeddu), 1909, A., i, 721.
  chloro*di*nitro- (two) (Kunckell), 1908, A., i, 729.
  *o*-, *m*-, and *p*-hydroxy-, hydrazine compounds of (Franzen and Eichler), 1908, A., i, 831.

*o*-**Toluic acid**, salts of, with organic bases (Sudborough and Roberts), 1904, T., 241.
  ethylene ester (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 554.

*o*-**Toluic acid**, ω-amino- (Wegscheider and Glogau), 1904, A., i, 250.
  5-bromo- (Konowaloff), 1904, A., i, 657.
  5-chloro-3-amino- (Kalle & Co.), 1912, A., i, 209.
  3:5-*di*chloro-6-nitro- (Crossley), 1904, T., 281; P., 21.

(*Toluene compounds, Me* = 1.)

*o*-**Toluic acid**, 4-hydroxy-, and its bromoderivatives and their acetyl compounds, and bromoamino-, and bromonitro-derivatives (Zincke and Fischer), 1907, A., i, 132.
  reduction of (Baudisch, Hibbert, and Perkin), 1909, T., 1870; P., 249.
  action of bromine on (Zincke and Buff), 1908, A., i, 643.
  6-hydroxy-, reduction of (Baudisch and Perkin), 1909, T., 1883; P., 249.
  *p*-nitro-, action of caustic alkalis and hypochlorites on (Green, Davies, and Horsfall), 1907, T., 2081.

*m*-**Toluic acid** (Müller), 1909, A., i, 159.
  ultra-violet absorption spectra of (Baly), 1907, T., 846.
  nitration of (Wheeler and Hoffman), 1911, A., i, 50.
  reactions of, and its 2-amino-, and 2-nitro-derivatives and their esters, amides and nitrites (Jürgens), 1907, A., i, 1036.
  ethyl ester, density, magnetic rotation, and refractive power of (Perkin), 1907, T., 845.

*m*-**Toluic acid**, 2- and 4-amino- and -nitro- (Findeklee), 1906, A., i, 21.
  ω-amino-, *N*-acyl derivatives of (Einhorn, Bischkopff, Szelinski, and Mauermayer), 1906, A., i, 247.
  4:6-*di*amino-, acetyl derivative (Bogert and Kropff), 1909, A., i, 584.
  5-bromo-6-hydroxy- (Robertson), 1908, T., 789; P., 73; (Moir), 1911, P., 227.
  ω-chloro-6-hydroxy-, and 6-hydroxy-, ethyl esters (Auwers), 1906, A., i, 839.
  2-hydroxy-, and its derivatives, and the action of phosphorus chlorides on (Anschütz, Schroeder, Weber, and Anspach), 1906, A., i, 505.
  4-hydroxy-, action of phosphorus chlorides on (Anschütz and Schroeder), 1906, A., i, 507.
  5-hydroxy-, reduction of (Meldrum and Perkin), 1909, T., 1889; P., 249.
  ω-hydroxy-, and its nitrile (Langguth), 1905, A., i, 593.
  2-iodo-, and its methyl ester (Mayer), 1911, A., i, 870.
  5-iodo-4-amino-, and its ethyl ester (Wheeler and Hoffman), 1910, A., i, 666.

(*Toluene compounds, Me* = 1.)
*m*-**Toluic acid**, 2-nitro- (Noelting and Gachot), 1906, A., i, 181.
  4-, 5-, and 6-nitro-, methyl esters, and 5-amino- (Müller), 1909, A., i, 160.
  4:6-*di*nitro-, and its ethyl ester, and 6:4-nitroamino-, methyl ester (Errera and Maltese), 1904, A., i, 307.
  4-nitro-6-amino- and 6-nitro-4-amino-, and their *N*-acetyl derivatives and their salts (Errera and Maltese), 1906, A., i, 84.
  2-nitroso- (Freundler), 1911, A., i, 758.
  preparation of (Freundler and Sevestre), 1909, A., i, 70.
*ψ*-*m*-**Toluic acid.** See $\Delta^{\alpha\zeta}$-Heptadiinene-δ-carboxylic acid.
*p*-**Toluic acid**, *p*-tolyl ester of (Mascarelli and Russi), 1910, A., i, 746.
*p*-**Toluic acid**, *o*-amino-, acetyl derivative (Kunckell), 1911, A., i, 991.
  2:6-*di*amino-, methyl ester and acetyl derivative (Kauffmann and Weissel), 1912, A., i, 865.
  ω-chloro-, and its chloride (Badische Anilin- & Soda-Fabrik), 1912, A., i, 176.
  ω-*di*chloro-, methyl ester (Wegscheider and Suida), 1912, A., i, 976.
  chloroimino-, chloroimino-2-nitro-, and imino-2-nitro-, isomeric esters of (Hilpert), 1908, A., i, 830.
  2-hydroxy-, preparation and reduction of (Meldrum and Perkin), 1908, T., 1420 ; P., 187.
  3-hydroxy-, action of phosphorus chlorides on (Anschütz and Schroeder), 1906, A., i, 506.
  2:5-*di*hydroxy- (*hydroxyhomosalicylic acid*), constitution of (Schmid), 1911, A., i, 780.
  3-hydroxy-5-nitro- (Clayton), 1910, T., 1402.
  ω-iodo- (Knoll & Co.), 1911, A., i, 432.
  6-nitro-3-hydroxy- ("6-*nitro*-3-*hydroxy*-2-*cresotic acid*") (Borsche and Berkhout), 1904, A., i, 416.
  3:5-*di*nitro-2-hydroxy- (Borsche and Böcker), 1904, A., i, 166.
**Toluic acids,** condensing influence of potassium persulphate on the (Fischer and Wolffenstein), 1904, A., i, 896.
  *m*- and *p*-, acid salts of, and the effect of water and alcohol on them (Farmer), 1903, T., 1442 ; P., 274.

(*Toluene compounds, Me* = 1.)
**Toluic acids**, *o*-, *m*-, and *p*-, preparation of anhydrides of, and silver salts, action of sulphur monochloride on (Denham), 1909, T., 1239 ; P., 179.
  menthyl esters of (Cohen and Dudley), 1910, T., 1749.
**Toluic acids**, hydroxy- (*cresotic acids*), anilides of (Einhorn and Mettler), 1903, A., i, 30.
  azo-derivatives of (Puxeddu and Maccioni), 1907, A., i, 798.
  *o*- and *p*-thiol- (Weigert), 1903, A., i, 418.
*m*-**Toluic anhydride** (Denham), 1909, T., 1240 ; P., 179.
*p*-**Toluic selenoamide** (Becker and Meyer), 1904, A., i, 698.
*p*-**Toluidides**, anilides, and α-naphthalides of normal fatty acids, melting points of (Robertson), 1908, T., 1033 ; P., 120.
**Toluidilacetonedicarboxylic acids**, *o*-, *m*-, and *p*-, and their amides and imides (Schroeter and Stassen), 1905, A., i, 820.
*o*-**Toluidine**, preparation of pure, and a method for ascertaining its purity (Holleman), 1905, A., i, 272.
  latent heat of vaporisation of (Luginin), 1903, A., ii, 7.
  influence of temperature on the action of acetyl thiocyanate on (Doran and Dixon), 1905, T., 338 ; P., 77.
  action of dichloroacetic acid on (v. Ostromisslensky), 1908, A., i, 82.
  condensation of formaldehyde with (Nastukoff and Kroneberg), 1912, A., i, 962.
  action of ethyl chloroacetate on the magnesium halogen compound of (Bodroux), 1905, A., i, 643.
  phosphorus compounds of (Lemoult), 1904, A., i, 380.
  hydrogen phosphite (Lemoult), 1906, A., i, 493.
  acetyl derivative. See Aceto-*o*-toluidide.
  α-iodopropionyl and α-iodobutyryl derivatives (Bodroux and Taboury), 1907, A., i, 754.
  magnesium iodide, action of esters of α-iodo-fatty acids on (Bodroux and Taboury), 1907, A., i, 754.
  and *o*-nitrotoluene, estimation of impurities in (Holleman), 1909, A., ii, 192.
*o*-**Toluidine**, *mono*- and *di*-*m*-bromo-, oxalyl derivative (Taussig), 1904, A., i, 663.

(*Toluene compounds*, *Me* = 1.)

- *o*-**Toluidine**, 6-bromo-, and its acetyl derivative (Friedländer, Bruckner, and Deutsch), 1912, A., i, 318.
  - 3:5-*di*bromo-4-nitro- (Blanksma), 1909, A., i, 780.
  - 5-chloro-6-nitro- and 6-nitro-5-hydroxy-, and its diacetyl derivative (Brand and Zöller), 1907, A., i, 756.
  - 5-iodo- (Fichter and Philipp), 1907, A., i, 83.
  - 3-iodo-5-nitro- (Wheeler and Hoffman), 1911, A., i, 28.
  - 5-iodo-3- and -4-nitro-, and -4:5-*di*iodo- (Wheeler and Brautlecht), 1911, A., i, 27.
  - 5-iodo-6-nitro- and 3:6-*di*iodo- (Wheeler and Brautlecht), 1910, A., i, 663.
  - 4-nitro-, bromination of (Morgan and Clayton), 1905, T., 951.
    - hydrochloride of (Willgerodt and Kok), 1908, A., i, 620.
  - *di*- and *tri*-thio-, and their salts and derivatives (Hodgson), 1912, T., 1696; P., 222.
- *m*-**Toluidine**, effect of heat on a mixture of benzaldehydecyanohydrin and (Bailey and McCombie), 1912, T., 2272; P., 266.
  - picrate, preparation and crystallography of (Jerusalem), 1909, T., 1284.
  - *p*-toluene-sulphinate and -sulphonate (v. Meyer and E. Meyer), 1903, A., i, 810.
  - new sensitive indicator from (Tröger and Hille), 1904, A., i, 118.
- *m*-**Toluidine**, 2:4:6-*tri*bromo-5-nitro- (Blanksma), 1909, A., i, 780.
  - 2-, 4-, and 6-chloro- (Bamberger and de Werra), 1903, A., i, 21; (Bamberger, Ter-Sarkissjanz, and de Werra), 1903, A., i, 25.
  - 2-iodo- (Wheeler and Liddle), 1910, A., i, 18.
  - *p*-iodo-, and its 6-chloro-derivatives, and their salts and acyl derivatives (Willgerodt and Simonis), 1906, A., i, 156.
    - phenylthiocarbamide derivative, 5-iodo-, and 4:5-*di*iodo-, and their acetyl derivatives (Wheeler and Scholes), 1910, A., i, 663.
  - 2:4-*di*iodo-, and 2:4:6-*tri*iodo-, and their derivatives (Wheeler and Hoffman), 1910, A., i, 662.
  - 2:5-*di*iodo-, and 2:5:6-*tri*iodo- (Wheeler and Brautlecht), 1911, A., i, 27.

(*Toluene compounds*, *Me* = 1.)

- *m*-**Toluidine**, 2:6-*di*iodo-, and its hydrochloride (Wheeler and Brautlecht), 1910, A., i, 663.
  - 5:6-*di*iodo-, 4:5:6-*tri*iodo-, and 2:4:5:6-*tetra*iodo- (Wheeler and Hoffman), 1911, A., i, 28.
  - 2:6-*di*nitro- (Meisenheimer and Patzig), 1906, A., i, 653.
- *p*-**Toluidine**, preparation of, from mixed toluidines by means of *p*-toluidine hydrate (Friswell), 1908, A., i, 332.
  - and its condensation product with acetaldehyde, absorption spectra of (Purvis), 1910, T., 644; P., 56.
  - latent heat of vaporisation of, and association of (Kurbatoff), 1909, A., ii, 132.
  - freezing points of mixtures of, with the dihydric phenols (Philip and Smith), 1905, T., 1735; P., 255.
  - reactions of, with citraconic acid (Fichter and Tschudin), 1907, A., i, 81.
  - reactions of, with crotonic acid (Fichter and Preiswerk), 1907, A., i, 84.
  - reaction of, with epichlorohydrin (Cohn and Friedländer), 1904, A., i, 866.
  - action of ethyl pyruvate on (Simon), 1908, A., i, 687, 738.
  - action of glyoxylic acid on (v. Ostromisslensky), 1908, A., i, 889.
  - compound of phenylazoimide and (Wolff and Kolasius), 1912, A., i, 1028.
  - and 3-bromo-, aldol bases from, and their derivatives (Edwards, Garrod, and Jones), 1912, T., 1380; P., 163.
  - cobaltinitrite (Hofmann and Buchner), 1908, A., i, 875; (Cunningham and Perkin), 1909, T., 1566.
  - picrates (Suida), 1908, A., i, 523.
  - acetyl derivative. See Aceto-*p*-toluidide.
  - diacetyl derivative, hydrochloride of (Dehn), 1912, A., i, 834.
  - acetyltoluenesulphonyl derivative (Reverdin and de Luc), 1911, A., i, 38.
  - *N*-acyl derivatives (Fichter and Rosenberger), 1907, A., i, 85.
  - alkyl derivatives, behaviour of, in the organism (Hildebrandt), 1906, A., ii, 110.
  - isosuccinic acid derivative of, antipyretic action of (Malerba), 1906, A., ii, 693.

(*Toluene compounds, Me* = 1.)

- *p*-**Toluidine**, monohydrate (Walker and Beveridge), 1907, T., 1797 ; P., 236.
  - colour reaction for (Biehringer and Busch), 1903, A., ii, 192.
  - detection of small quantities of (Holleman), 1905, A., i, 272.
- *p*-**Toluidine**, 3:5-*di*bromo-2-nitro- (Blanksma), 1909, A., i, 780.
  - 3-chloro-5-bromo- (Orton and Reed), 1907, T., 1570 ; P., 212.
  - 3-chloro-2-nitro- and 5-chloro-2-nitro- (Brand and Zöller), 1907, A., i, 756.
  - 2-iodo- (Blanksma), 1909, A., i, 937.
  - and its salts (Willgerodt and Gartner), 1908, A., i, 876.
  - 3-iodo- and its hydrochloride, oxalate, and acetyl and benzoyl derivatives (Wheeler and Liddle), 1910, A., i, 17.
  - 2:5-*di*iodo- (Wheeler and Brautlecht), 1911, A., i, 28.
  - 3:5-*di*iodo- and its acetyl derivative (Wheeler and Liddle), 1910, A., i, 18.
  - 5-iodo-3-nitro- (Wheeler and Scholes), 1910, A., i, 663.
  - *tri*nitro-, action of amines on derivatives of (Sommer), 1903, A., i, 655.
- **Toluidines**, xylenes, and nitrotoluenes, freezing mixtures of (Fischer), 1910, A., i, 309.
  - action of dichloroacetic acid on (Heller), 1904, A., i, 730.
  - dibenzoyl derivatives, transformation of, into the isomeric benzoylaminomethylbenzophenones (Chattaway and Lewis), 1904, T., 589 ; P., 60.
- *o*- and *m*-**Toluidines**, absorption spectra of (Purvis), 1910, T., 1551.
  - 5- and 6-iodo-derivatives of (Artmann), 1905, A., i, 878.
- *o*- and *p*-**Toluidines**, compounds of, with antimony trichloride (May), 1911, T., 1384 ; P., 125.
  - acetyl derivatives. See Aceto-*o*- and -*p*-toluidides.
  - benzoyl derivatives. See Benzo-*o*- and -*p*-toluidides.
  - calcium derivatives of (Erdmann and van der Smissen), 1908, A., ii, 588.
  - formyl derivatives, crystalline and liquid modifications of (Orloff), 1905, A., i, 643.
  - *N*-lauroyl derivatives (Guérin), 1904, A., i, 136.
  - hydrochlorides, double salts with palladous bromides and chlorides (Gutbier), 1905, A., i, 584.

(*Toluene compounds, Me* = 1.)

- *o*- and *p*-**Toluidines**, imides from (Orloff), 1906, A., i, 420.
- *o*- and *p*-**Toluidines**, nitro-, *N*-formyl derivatives of (Anilinfarben- & Extrakt-Fabriken vorm. Geigy & Co.), 1903, A., i, 522.
- *o*-, *m*-, and *p*-**Toluidines**, relative rates of oxidation of (Bradshaw), 1906, A., i, 360.
  - action of dichloroacetic acid on (Heller), 1908, A., i, 217.
  - diazoamino-compounds from (Vignon and Simonet), 1905, A., i, 397.
  - picrates of (Vignon and Évieux), 1908, A., ii, 665.
  - hydrogen tartrates, rotatory power of (Minguin and Wohlgemuth), 1909, A., i, 11.
  - telluri-bromides and chlorides (Gutbier, Flury, and Ewald), 1912, A., i, 689.
- **Toluidine series**, pharmacological and chemo-therapeutic studies in the (Hildebrandt), 1911, A., ii, 514.
- **Toluidine-aniline oil** from Caucasian naphtha (Ogloblin), 1904, A., i, 729.
- *p*-**Toluidine-2-methylsulphone** and its acetyl derivative (Zincke and Rollhaüser), 1912, A., i, 551.
- *p*-**Toluidine-2-methylsulphoxide** and its acetyl derivative (Zincke and Rollhaüser), 1912, A., i, 551.
- *o*-**Toluidine-5-sulphonic acid**, 3-chloro- (Badische Anilin- & Soda-Fabrik), 1910, A., i, 271.
- *p*-**Toluidine-2-sulphonic acid**, acetyl derivative, and its derivatives (Zincke and Rollhaüser), 1912, A., i, 549.
- **Toluidinoacetic acid**, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1907, A., i, 312.
- **Toluidinoacetones**, *o*-, *m*-, and *p*- (Richard), 1907, A., i, 755.
- *p*-**Toluidinoacetonitrile** and its phenyl derivative (Knoevenagel, Schleussner, and Klucke), 1904, A., i, 989.
- *ω*-*p*-**Toluidinoacetophenone**, derivatives of (Busch and Hefele), 1911, A., i, 583.
- *p*-**Toluidinoacetothioamide** (Johnson and Burnham), 1912, A., i, 305.
- *p*-**Toluidinoacryl**-*p*-**toluidide** (Wohl and Freund), 1907, A., i, 585.
- 4-*p*-**Toluidinoalizarin** 2-methyl ether (Farbwerke vorm. Meister, Lucius, & Brüning), 1905, A., i, 709.
- **Toluidinoaminobenzoic acid**. See 2-Methyldiphenyl-2′-carboxylic acid, 4:4′-*di*amino-.

(*Toluene compounds, Me* = 1.)

*ω*-*p*-**Toluidinoamyl-*p*-tolylcyanamide** and its hydrobromide and hydrochloride (v. Braun), 1907, A., i, 961.

4 *p*-**Toluidino-1-anthrapyrimidone** (Farbenfabriken vorm. F. Bayer & Co.), 1910, A., i, 445.

1-*p*-**Toluidinoanthraquinone,** *o*-nitro- (Ullmann and Fodor), 1911, A., i, 468.

4-*p*-**Toluidinoanthraquinone,** 1-amino-, acetyl derivative (Farbenfabriken vorm. F. Bayer & Co.), 1904, A., i, 434.

1-hydroxy- (*quinizarin-blue*), and 2-bromo-1-amino- (Friedlander and Schick), 1904, A., i, 679.

4-*p*-**Toluidinoanthraquinone-2:1-acridone** (Ullmann and Billig), 1911, A., i, 491.

*p*-**Toluidino-1-anthraquinone-2-carboxylic acid** (Badische Anilin- & Soda-Fabrik), 1911, A., i, 980.

2-*p*-**Toluidinobenzoic acid,** 3:5-*di*nitro- (Zincke), 1910, A., i, 556.

4-*p*-**Toluidinobenzoic acid,** 3-amino- and 3-nitro- (Delétra and Ullmann), 1904, A., i, 271.

*β*-*o*-**Toluidinobenzylacetoacetic acid,** ethyl ester (Ruhemann and Watson), 1904, T., 1177.

*p*-**Toluidinobenzylacetophenone** (Mayer), 1905, A., i, 214.

*β*-*m*- and -*p*-**Toluidinobenzylacetylacetones** (Ruhemann and Watson), 1904, T., 1174; P., 175.

*m*-**Toluidino*iso*butyronitrile,** amino-, and its amide (Bucherer and Grolée), 1906, A., i, 350.

*α*-**Toluidino*iso*butyronitriles** and their amides, *o*- and *p*- (Bucherer and Groleé), 1906, A., i, 349.

*m*-**Toluidinocarballylic acid** (Schroeter and Stassen), 1905, A., i, 820.

4-*o*-**Toluidinocoumarin** (*benzotetron*-*o*-*toluidide* (Anschütz, Anspach, Fresenius, and Claus), 1909, A., i, 662.

2-*o*- and -*p*-**Toluidinodihydro-6-pyrimidones** (Johnson, Storey, and McCollum), 1908, A., i, 837.

1-*p*-**Toluidino-2:4-dihydroxyanthraquinone,** 3-bromo- (Farbenfabriken vorm. F. Bayer & Co.), 1904, A., i, 934.

1:5-*p*-**Toluidinodimethylaminoanthraquinone** (Farbenfabriken vorm. F. Bayer & Co.), 1903, A., i, 499.

(*Toluene compounds, Me* = 1.)

4-*p*-**Toluidino-4-dimethylaminoanthraquinonesulphonic acid** (Farbwerke vorm. Meister, Lucius, & Brüning), 1906, A., i, 968.

3-**Toluidino-1:1-dimethyl-$\Delta^{2:5}$-*cyclo*hexadien-4-ol** and its hydrochloride and acetyl derivative (Haas), 1906, T., 196.

3-*p*-**Toluidino-1:1-dimethyl-$\Delta^{3}$-*cyclo*hexen-5-one,** *N*-acetyl derivative, and its semicarbazone (Haas), 1906, T., 197.

7-*p*-**Toluidino-3:6-dimethylphenoxazine** and its derivatives (Börnstein), 1910, A., i, 779.

*α*-*p*-**Toluidinodiphenylacetic acid** and its ethyl and methyl esters (Klinger), 1912, A., i, 558.

*α*-*p*-**Toluidinodiphenylaceto-*p*-toluidide** (Klinger), 1912, A., i, 557.

**Toluidinodiphenylmethanes,** *o*- and *p*-, and their hydrochlorides (Busch and Rinck), 1905, A., i, 519.

*o*-**Toluidinoformaldehydesulphoxylic acid,** sodium salt (Reinking, Dehnel, and Labhardt), 1905, A., i, 261.

1-*o*-**Toluidino-4-hydroxyanthraquinone** and its acetate (Grandmougin), 1908, A., i, 808.

10(7)-*p*-**Toluidino-1-hydroxynaphthacenequinone,** 7(10)-chloro- (Harrop, Norris, and Weizmann), 1909, T., 285.

*p*-**Toluidino-*γ*-itaconic acid,** ethyl ester (Wislicenus, Böklen, and Reuthe), 1909, A., i, 10.

**Toluidinomalonic acids,** and nitroso-, ethyl esters (Curtiss), 1903, A., i, 754.

1-*p*-**Toluidino-8-methoxyanthraquinone,** 4-amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 243.

4-*p*-**Toluidino-1-methylaminoanthraquinone** (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 293.

5-*p*-**Toluidino-1-methylaminoanthraquinone** (Farbenfabriken vorm. F. Bayer & Co.), 1903, A., i, 564.

6-*p*-**Toluidino-4-methylanthrapyridone** (Badische Anilin- & Soda-Fabrik), 1909, A., i, 262.

4-**Toluidino-1-methylanthraquinone** (Heller, Grünthal, and Ruhtenberg), 1912, A., i, 359.

4-*p*-**Toluidino-7-methylcoumarin** (Anschütz, Wagner, and Junkersdorf), 1909, A., i, 664.

*p*-**Toluidinomethyleneacetoacetanilide** (Dains and Brown), 1909, A., i, 781.

(*Toluene compounds, Me* = 1.)

*o*- and *m*-**Toluidinomethyleneacetylacetone** (Dains and Brown), 1909, A., i, 782.

*m*-**Toluidinomethylenebenzyl cyanide** (Dains and Brown), 1909, A., i, 782.

*p*-**Toluidino-*d*-methylenecamphor,** rotatory power of (Pope and Read), 1909, T., 177 ; P., 19.

**4-*o*-Toluidinomethylene-1:3-diphenyl-5-pyrazolone** (Dains and Brown), 1909, A., i, 782.

*m*-**Toluidinomethylenemalonic acid,** ethyl ester, *m*-toluidide of (Dains and Brown), 1909, A., i, 781.

**4-*p*-Toluidinomethylene-1-phenyl-3-methyl-5-pyrazolone** (Dains and Brown), 1909, A., i, 782.

**1-*o*- and -*p*-Toluidino-3-methylthiazoles** and their acetyl derivatives (Hugershoff), 1903, A., i, 865.

**β-Toluidinonaphthalenesulphonic acids** and their derivatives (Bucherer and Stohmann), 1904, A., i, 395.

**7-*p*-Toluidino-α-naphthol-3-sulphonic acid** (Bucherer and Seyde), 1907, A., i, 511.

**8-*p*-Toluidino-α-naphthol-4-sulphonic acid** (Farbenfabriken vorm. F. Bayer & Co.), 1907, A., i, 914.

**8-Toluidinonaphthylthiocarbamide,** *o*- and *p*- (Sachs), 1909, A., i, 432.

**2-*p*-Toluidino-3-5-*di*nitrobenzoic acid,** *o*-nitro-, and its salts (Cuttitta), 1906, A., i, 697.

  sodium and pyridine salts, crystallography of (Ranfaldi), 1906, A., i, 664.

**2-Toluidino-3:5-*di*nitrobenzoic acids,** *o*-, *m*-, and *p*- (Purgotti and Lunini), 1904, A., i, 315.

**Toluidinonitrobenzylsulphonic acids,** *o*- and *p*- (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 663.

**Toluidinoperimidine,** 2-*o*- and 2-*p*- (Sachs), 1909, A., i, 432.

**β-*p*-Toluidino-γ-phenoxy-α-*p*-chlorophenylcrotonitrile** (v. Walther and Herschel), 1911, A., i, 238.

**8-*p*-Toluidino-5-phenoxyquinizarin** (Frey), 1912, A., i, 477.

**α-*o*-Toluidinophenylacetonitrile** and its amide (Bucherer and Grolée), 1906, A., i, 349.

**5-*p*-Toluidino-1-phenyl-3-methylpyrazole,** 4-amino-, and its derivatives (Michaelis and Risse), 1911, A., i, 1039.

**4-*p*-Toluidinophenylpyridazoneanthrone** (Ullmann), 1912, A., i, 1028.

(*Toluene compounds, Me* = 1.)

**3-Toluidino-1-phenyl-4-*p*-tolyl-4:5-dihydro-1:2:4-triazole** (Busch and Mehrtens), 1906, A., i, 118.

**5-Toluidino-2-phenyl-1-*o*- and -*p*-tolyl-1:2:4-triazoles,** *o*- and *p*- (Busch), 1907, A., i, 260.

*p*-**Toluidino-1-phenyl-1:2:4-triazole,** 3:5- (or 5:3-)-amino-, and its acetyl derivative (Fromm and Weller), 1908, A., i, 702.

**4-*p*-Toluidinopyridazonanthrone** (Ullmann and Minajeff), 1912, A., i, 388.

**2-Toluidinopyrimidines,** *o*- and *p*-, 6-chloro- and 6-amino- of the *o*-compound (Johnson, Storey, and McCollum), 1908, A., i, 838.

*o*-, *m*-, and *p*-**Toluidinosuccinotolylimides** and nitroso- (Warren and Grose), 1912, A., i, 961.

*o*- and *p*-**Toluidinotartronic acid,** ethyl esters (Curtiss, Hill, and Lewis), 1911, A., i, 367.

*p*-**Toluidino-*m*- and -*p*-tolyliminoalloxanic acids** (Kühling and Kaselitz), 1906, A., i, 464.

**3-*p*-Toluidino-5-*p*-tolylimino-1:1-dimethyl-$\Delta^3$-*cyclo*hexene** and its additive salts and benzoyl derivative (Haas), 1906, T., 199.

**7-*p*-Toluidino-10-*p*-tolyl-1-methylsafranol** (Heller), 1912, A., i, 917.

**7-*o*-Toluidino-10-*o*-tolylsafranol** (Heller), 1912, A., i, 917.

**3-*o*-Toluidino-4-*o*-tolyl-1:2:4-triazol-5-one** (Busch and Blume), 1907, A., i, 261.

*o*-**Toluimino-methyl and -ethyl ethers** (Lander and Jewson), 1903, T., 769 ; P., 160.

**9-Tolunaphthazine.** See 9-Methyl-αβ-naphthaphenazine.

*o*-, *m*-, and *p*-**Toluobornylamides** (Frankland and Barrow), 1909, T., 2040 ; P., 263.

**Toluoins,** *o*-, *m*-, and *p*- (Ekecrantz and Ahlqvist), 1908, A., i, 993.

*p*-**Toluoinhydrazine** (Curtius and Kastner), 1911, A., i, 325.

*p*-**Toluonitrile,** reduction of (Frébault), 1905, A., i, 437.

*p*-**Toluonitrile,** 3-amino-, acyl derivatives of, and 3-nitro- (Bogert and Hoffman), 1905, A., i, 391.

  ω-chloro-, and its compound with pyridine (Badische Anilin- & Soda-Fabrik), 1912, A., i, 355.

*o*-**Toluosulphonoquinone,** 5-bromo- (Zincke and Kempf), 1912, A., i, 287.

*p*-**Toluoyl** chloride, ω-*di*chloro- (Wegscheider and Suida), 1912, A., i, 976.

(*Toluene compounds, Me* = 1.)

*p*-**Toluoylacetic acid** and its ethyl ester (Marguery), 1905, A., i, 527.

*p*-**Toluoylazo-benzene** and -*p*-**bromobenzene** (Ponzio and Charrier), 1909, A., i, 443.

*p*-**Toluoylbenzamide** (Wheeler, Johnson, and McFarland), 1903, A., i, 859.

**Toluoyl-*o*-benzoic acid,** *o*-chloro- (Gesellschaft für Chemische Industrie in Basel), 1909, A., i, 941.
  *o*- and *p*-chloro- (Heller and Schülke), 1908, A., i, 994.
  3:6-*di*chloro-3′(or 2′-)-hydroxy-, and 3:6-*di*chloro-5′(or 6′-)-hydroxy-, its sodium salt and bromo-derivative (Walsh and Weizmann), 1910, T., 689.

*m*-**Toluoyl-*o*-benzoic acid,** *p*-bromo- (Heller, Grünthal, and Ruhtenberg), 1912, A., i, 358.
  4(5):2′-*di*hydroxy- (Bentley, Gardner, and Weizmann), 1907, T., 1639.

*p*-**Toluoyl-*o*-benzoic acid,** isomeric methyl esters (Meyer), 1905, A., i, 134.

*p*-**Toluoyl-*o*-benzoic acid,** 3(6)- and 4(5)-amino-, and 3(6)- and 4(5)-chloro- (Badische Anilin- & Soda-Fabrik), 1911, A., i, 885.
  4(5):2′-*di*hydroxy- (Bentley, Gardner, and Weizmann), 1907, T., 1638.
  *tri*nitro- and *tri*amino- (Badische Anilin- & Soda-Fabrik), 1909, A., i, 243.

**Toluoyl-*o*-benzoic acids,** *m*- and *p*-, 2′-hydroxy- (Bentley, Gardner, and Weizmann), 1907, T., 1635.

*o*-**Toluoylbenzoylbenzene** (Guyot and Vallette), 1911, A., i, 652.

**Toluoylboric acid,** *tri-o-*, *-m-*, and *-p*-hydroxy- (Cohn), 1911, A., i, 641.

*α*-*p*-**Toluoyl-*β*-*p*-bromophenylhydrazine,** *β*-nitroso- (Giovetti), 1909, A., i, 739.

*β*-*p*-**Toluoyl-*α*-*p*-bromophenylhydrazine** (Ponzio and Charrier), 1909, A., i, 443.

2′-**Toluoyldiphenyl** sulphide, 2:4-*di*nitro- (Mayer), 1910, A., i, 262.

4-*p*-**Toluoylfluorenone** and its phenylhydrazone (Pick), 1905, A., i, 68.

**Toluoylformic acid.** See Tolylglyoxylic acid.

**Toluoylhydrazides,** *o*-, *m*-, and *p*-, and their *N*-benzylidene and -hydroxybenzylidene derivatives (Stollé and Stevens), 1904, A., i, 626.

*p*-**Toluoyl-*o*-hydrazotoluene** and its benzoyl derivative (Freundler), 1904, A., i, 34.

(*Toluene compounds, Me* = 1.)

*o*-**Toluoylnaphthoylbenzene** (Guyot and Vallette), 1911, A., i, 654.

*α*-*p*-**Toluoyl-*β*-phenylhydrazine,** *α*-nitro-*β*-nitroso- and *β*-nitroso- (Ponzio and Charrier), 1908, A., i, 582.

3-*p*-**Toluoylpicolinic acid,** preparation of (Halla), 1911, A., i, 1021.

*p*-**Toluoyltartaric acid,** nitro-, ethyl ester, preparation and rotation of (Frankland, Heathcote, and Green), 1903, T., 168.

*p*-**Toluoyl-*p*-tolylazomethylene.** See Azo-*p*-tolil.

*p*-**Toluoyl-*p*-tolylhydrazimethylene.** See Hydrazi-*p*-tolil.

*α*-*p*-**Toluoyl-*β**p*-tolylhydrazine,** and *β*-nitroso- (Giovetti), 1909, A., i, 738.

*p*-**Tolupropionitrile,** *α*-*iso*nitroso-*β*-nitrosoimino-, salts of (Lublin), 1907, A., i, 213.

**Toluquinol,** *tetra*bromo-, and its acetyl derivative and anilide (Zincke and Klostermann), 1907, A., i, 323.
  5-bromo-3-amino-, and its acetyl derivatives and *mono-* and *di*-bromonitro- (Zincke and Emmerich), 1905, A., i, 880.
  *o*-chloro- (Raiford), 1911, A., i, 994.
  *tetra*chloro-, and its derivatives (Zincke and Pfaffendorf), 1912, A., i, 964.
  *di*chlorohydroxy- (Zincke, Schneider, and Emmerich), 1903, A., i, 760.
  chloronitro-, and its diacetate (Zincke, Schneider, and Emmerich), 1903, A., i, 759.

**Tolu-*ψ*-quinol,** *ω*:2:3:5:6-*penta*chloro-, and its acetyl derivative (Zincke and Böttcher), 1906, A., i, 739.
  *ω*-chloro-2:3:5:6-*tetra*bromo-, and its acetyl derivative and anilide (Zincke and Böttcher), 1906, A., i, 168.
  3:6-*di*chloro-3-bromo-2-hydroxy- (Zincke and Buff), 1905, A., i, 881.
  2:3:5:6-*tetra*chloro-*ω*-cyano-, and its acetyl derivative (Zincke and Böttcher), 1906, A., i, 739.

**Toluquinolbenzein** (2:7-*dihydroxy*-3:6-*dimethyl*-9-*phenylxanthen*-9-*ol*) and its derivatives (Kehrmann and Silzer), 1910, A., i, 408.

**Toluquinoldiphenylacetic acid,** *β*-lactone of (Staudinger and Bereza), 1911, A., i, 461.

**Toluquinolphthalein** and its derivatives (Kehrmann and Silzer), 1910, A., i, 407.

(*Toluene compounds, Me* = 1.)
**Toluquinone**, action of magnesium methyl iodide on (Bamberger and Blangey), 1911, A., i, 883.
  bromonitro-derivatives (Zincke and Emmerich), 1905, A., i, 879.
**Toluquinone**, 2:6-*di*bromo-4-chloroimino-, *o*-chloro-, 2- and 4-chloro-6-chloroimino-, and 4-chloro-3-chloroimino- (Raiford), 1911, A., i, 993.
  4-chloro-3-hydroxy- (Henrich, Taubert, and Birkner), 1912, A., i, 184.
  *di*chlorohydroxy- (Zincke, Schneider, and Emmerich), 1903, A., i, 760.
**3:4-Toluquinone** and its reactions with substituted hydrazines (McPherson and Boord), 1911, A., i, 818.
2:3- and **3:4-Toluquinones** (*homo-o-benzoquinone*) and their bimolecular forms (Willstätter and Müller), 1911, A., i, 728.
*p*-**Toluquinone*di*chlorodi-imide** (Orloff), 1911, A., i, 89.
**Toluquinonedioxime**, benzoyl derivatives of (Oliveri-Tortorici), 1903, A., i, 838.
**Toluquinonediphenylsemicarbazone** (Borsche and Zeller), 1904, A., i, 1058.
**Toluquinoneimide** hydrochloride (Schmidt and Saager), 1904, A., i, 512.
*o*-**Toluquinoneimide**, amino-, nitrate (Piccard), 1910, A., i, 66.
**Toluquinoneimides**, *o*- and *m*-, amino-, salts of (Kehrmann and Prager), 1909, A., i, 967.
**Toluquinone-2-oxime-5-*o-mono*-** and **-5-*op-di*-nitrophenylhydrazones** (Borsche), 1908, A., i, 67.
**2-Toluquinoneoxime-5-** and **-6-semicarbazones** (Borsche and Reclaire), 1907, A., i, 988.
**Toluresazine** (Heiduschka and Scheller), 1910, A., i, 397.
**Tolusafranine**, acetyl derivative of (Orloff), 1911, A., i, 89.
*as*-**Tolusafranine** (Barbier and Sisley), 1907, A., i, 161.
*s*-**Tolusafranine** (Barbier and Sisley), 1907, A., i, 160.
**Tolu*apo*safranine** and its hydrochloride (Barbier and Sisley), 1907, A., i, 564.
**Tolusafraninones**, alkylated, preparation of (Farbwerke vorm. Meister, Lucius & Brüning), 1908, A., i, 225.

(*Toluene compounds, Me* = 1.)
**Tolyl** benzyl ethers, substituted (Farbwerke vorm. Meister, Lucius, & Brüning), 1903, A., i, 818.
  chlorocarbonates, reactions of, with thioureas (Dixon and Taylor), 1907, T., 921; P., 120.
  ethyl and ethylene ethers, bromo-derivatives of (Stoermer and Göhl), 1903, A., i, 848.
  iodo*di*chloride, *o*-amino-, *N*-acetyl derivative, and the iodoso-compound (Willgerodt and Heusner), 1907, A., i, 1026.
  *p*-iodofluoride (Weinland and Stille), 1903, A., i, 748.
*o*-**Tolyl** β-bromoethyl ether (Gattermann), 1908, A., i, 32.
  camphor-β-sulphonate, and hydrogen camphorate, and rotatory powers of (Hilditch), 1909, T., 338.
  dichloro-orthophosphate, ω-*tri*chloro-4:6-*di*bromo- (Anschütz and Robitsek), 1906, A., i, 503.
    4-chloro-ω-*tri*chloro- (Anschütz and Anspach), 1906, A., i, 503.
    ω-*tri*chloro-4:6-*di*iodo- (Anschütz, Robitsek, and Schmitz), 1906, A., i, 504.
  ether, bromo-, *di*bromo-, chloro-, and *di*chloro- (Mailhe and Murat), 1912, A., i, 254, 348.
  mercaptan, 4-amino-, and its derivatives (Zincke and Rollhaüser), 1912, A., i, 550.
    4-iodo- (Zincke and Rollhaüser), 1912, A., i, 551.
  methyl ether, *p*-nitro-, action of caustic alkalis and air on (Green, Davies, and Horsfall), 1907, T., 2080.
  orthophosphate, 4:6-*di*chloro-ω-*di*chloro- (Anschütz and Mehring), 1906, A., i, 501.
  trimethylene ether, and its di-4:4′-aldehyde (Gattermann), 1908, A., i, 34.
*m*-**Tolyl** benzyl ether, *tri*iodo- (Auwers), 1907, A., i, 1034.
  ether and its *di*amino-, *di*- and *tetra*bromo-, and *di*nitro-derivatives (Cook), 1907, A., i, 126.
    *di*- and *tetra*-bromo- (Cook), 1910, A., i, 731.
  ethylene ether (Gattermann), 1908, A., i, 34.
  glycerol ether, 5-chloro- (Ehlotzky), 1909, A., i, 786.
  glycide ether (Marle), 1912, T., 307.

(*Toluene compounds*, *Me* = 1.)

*m*-**Tolyl** mercaptan, 2:4-*di*amino-, and its hydrochloride (Schultz and Beyschlag), 1909, A., i, 269.

methyl ether, action of nitric acid on (Henrich and Nachtigall), 1903, A., i, 414.

and an oxidation product of its amino-derivative (Henrich and Roters), 1909, A., i, 57.

amino-, an oxidation product of (Henrich and Schierenberg), 1905, A., i, 93.

2-amino- and 2- and 6-nitro-5-hydroxy- (Henrich and Nachtigall), 1903, A., i, 414.

*p*-bromo- (Pschorr and Koch), 1912, A., i, 767.

4-nitro-, and 4-amino-, and its acetyl derivative (Khotinsky and Jacopson-Jacopmann), 1909, A., i, 805.

2:4:6-*tri*nitro- (Blanksma), 1903, A., i, 164.

*p*-**Tolyl** acetate, *o*-amino-, benzoyl derivative (Auwers and Eisenlohr), 1909, A., i, 916.

benzoate, *o*-amino-, and its derivatives (Auwers and Eisenlohr), 1909, A., i, 916.

*o*-nitro-, and its reduction (Auwers), 1908, A., i, 477.

carbonate, *tetra*bromo-, and 3:5-*di*chloro-2:6-*di*bromo-, and its reactions (Zincke and Suhl), 1907, A., i, 37.

*o*-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 299.

chlorothiolacetate (Auwers and Arndt), 1909, A., i, 176.

benzyl selenide (Taboury), 1906, A., i, 834.

*o*-amino-*m*-tolyl sulphide and its salts and acyl and aldehydic derivatives (v. Meyer and E. Meyer), 1903, A., i, 809.

*m*-amino-*o*-tolyl sulphide and its salts (v. Meyer and E. Meyer), 1903, A., i, 810.

*tri*chloromethyl sulphide, and 2-bromo- (Zincke and Frohneberg), 1910, A., i, 315.

ether, bromo-, *di*bromo-, chloro-, and *di*chloro- (Mailhe and Murat), 1912, A., i, 254.

*tetra*bromo- (Cook), 1911, A., i, 284.

ethyl ether, action of sulphuric acid on (Roberts and Alleman), 1911, A., i, 369.

(*Toluene compounds*, *Me* = 1.)

*p*-**Tolyl** ethyl ether, bromo- and 3-*mono*- and 3:5-*di*-chloro- (Autenrieth and Mühlinghaus), 1907, A., i, 32.

2:5-*di*hydroxy- (Jacobson and Jankowski), 1909, A., i, 853.

glycide ether (Cohn and Plohn), 1907, A., i, 605; (Les Établissements Poulenc Frères and Fourneau), 1911, A., i, 291.

iodoxyfluoride hydrofluoride (Weinland and Reischle), 1909, A., ii, 37.

mercaptan sulphate, 2-amino- (Fichter and Bernoulli), 1910, A., i, 21.

2-bromo- (Zincke and Frohneberg), 1910, A., i, 315.

methyl ether, *o*-amino-, acetyl derivative (Kalle & Co.), 1911, A., i, 666.

2-chloro- (Ullmann and Wagner), 1907, A., i, 848.

6-chloro-3-amino-, and its acetyl derivative and 3:6-*di*chloro- (de Vries), 1910, A., i, 29.

*o*- and *m*-iodo- and iodoso-derivatives of (Willgerodt and Schloss), 1911, A., i, 715.

3-nitro-, reduction of (de Vries), 1910, A., i, 29.

*ω*-*di*nitro-, diazobenzene derivative (Ponzio and Charrier), 1908, A., i, 582.

methyl sulphide (Auwers and Arndt), 1909, A., i, 175.

dibromide and sulphoxide, 2-bromo-, sulphide, sulphide dibromide, sulphoxide and sulphone, 2:5-*di*bromo-, sulphide, sulphide dibromide, and sulphoxide (Zincke and Frohneberg), 1910, A., i, 315.

orthoformate (Auwers and Hessenland), 1907, A., i, 400.

propionate, *o*-amino-, acetyl derivative (Auwers and Eisenlohr), 1909, A., i, 916.

*di*sulphide, 2-amino- and its sulphate and acetyl derivative (Fichter and Bernoulli), 1910, A., i, 21.

*tri*sulphide (Holmberg), 1910, A., i, 165.

*o*- and *p*-**Tolyl** alkyl carbonates, amino-, bromoamino-, bromonitro-, and nitro-derivatives and their salts (Upson), 1904, A., i, 734.

*di*sulphides (Weigert), 1903, A., i, 418.

(*Toluene compounds, Me* = 1.)

*o*-, *m*-, and *p*-**Tolyl** antimonites (MACKEY), 1909, T., 608; P., 98.

arsenites (LANG, MACKEY, and GORTNER), 1908, T., 1370.

glycerol ethers (SCHIVKOVITCH), 1908, A., i, 978.

methyl ethers, dielectric constants of, dissolved in benzene and *m*-xylene (PHILIP and HAYNES), 1905, T., 1002; P., 200.

*o*-**Tolylacetaldehyde** and its oxime and thiosemicarbazone (KRONIK), 1911, A., i, 210.

*p*-**Tolylacetaldehyde** and its derivatives (KLING), 1908, A., i, 188.

*p*-**Tolylacetoacetic acid**, α-hydroxy-, methyl ester (GUYOT and BADONNEL), 1909, A., i, 305.

*p*-**Tolylacetonazine**, *iso*nitroso- (PONZIO and GIOVETTI), 1908, A., i, 835.

*p*-**Tolylacetone** semicarbazone (AUWERS), 1906, A., i, 963.

**Tolylacetones**, *o*-, *m*-, and *p*-, and their oximes and semicarbazones (TIFFENEAU), 1907, A., i, 305.

*m*-**Tolylacetonitrile**, *p*-amino-, and its salts, *p*-hydroxy-, and *p*-nitro- (BARGER and EWINS), 1910, T., 2256.

**Tolylacetonitriles**, *o*-, *m*-, and *p*-, preparation of, and formation of methyl derivatives of 1:3-naphthylenediamine from (ATKINSON and THORPE), 1907, T., 1099; P., 216.

formation of methyl derivatives of 2-phenyl-1:3-naphthylenediamine from (BEST and THORPE), 1909, T., 261; P., 28.

*d*-*p*-**Tolylacetylalanine** (DAKIN), 1911, A., ii, 416.

*p*-**Tolylacetylanilinosulphoxide** (v. MEYER and HEIDUSCHKA), 1903, A., i, 809.

*p*-**Tolylacraldehyde** and its oxime, phenylhydrazone, and semicarbazone (SCHOLTZ and WIEDEMANN), 1903, A., i, 437.

**5-Tolylacridines**, *o*-, *m*-, and *p*-, and their additive derivatives (SCHMID and DECKER), 1906, A., i, 305.

*p*-**Tolylacrylic acid** (SCHROETER), 1904, A., i, 415.

and its ethyl ester and bromo-derivatives and *m*-nitro- (GATTERMANN), 1906, A., i, 589.

*p*-**Tolylacrylic acid**, α-amino-, benzoyl derivative (DAKIN), 1911, A., ii, 416.

ω-amino-, and its derivatives (EINHORN and GÖTTLER), 1910, A., i, 111.

(*Toluene compounds, Me* = 1.)

α-*p*-**Tolylacrylic acid**, β-chloro-, and its ethyl ester (AUWERS), 1911, A., i, 299.

*p*-**Tolylalanine** and its hydrochloride (DAKIN), 1911, A., ii, 416.

*p*-**Tolyl** *p*-**aldehydostyryl ketone** and its phenylhydrazone (v. LENDENFELD), 1907, A., i, 222.

*s*-*p*-**Tolylallylthiocarbamide** (YOUNG and CROOKES), 1906, T., 71.

**Tolylamino-**. See Toluidino-.

1-*p*-**Tolyl-1:2-4**-*tri***aminonaphthalene** (MORGAN and MICKLETHWAIT), 1912, P., 325.

**Tolylammonium** salts, isomerism of asymmetric (WEDEKIND and OBERHEIDE), 1904, A., i, 732, 992.

*o*-, *m*-, and *p*-**Tolylammonium** osmichlorides (GUTBIER and WALBINGER), 1911, A., i, 191.

platinibromides (GUTBIER, BAURIEDEL, and OBERMAIER), 1911, A., ii, 33.

β-*p*-**Tolyl**-$\Delta^{\alpha}$-**amylene** (GRISHKEWITSCH-TROCHIMOWSKY), 1911, A., i, 291.

*s*-*p*-**Tolyl***iso***amyloxymethylthiocarbamide** (JOHNSON and GUEST), 1909, A., i, 371.

*N*-*m*- and *p*-**Tolylanisaldoximes** and their hydrogen tri-iodides (BECKMANN, EBERT, NETSCHER, and SCHULZ), 1909, A., i, 653.

**Tolylanisylacetic acid**, *p*-hydroxy-, lactone of (STOERMER and DECKER), 1911, A., i, 666.

**Tolylanthranilic acids**, *o*- and *p*-, preparation of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1904, A., i, 159.

*o*-, *m*-, and *p*- (ULLMANN and BADER), 1907, A., i, 843.

**Tolylanthraquinone**, 2-chloro-5- and 2-chloro-8-amino- (BADISCHE ANILIN- & SODA-FABRIK), 1909, A., i, 940.

*p*-**Tolyl-2-anthraquinonylcarbamide** (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1912, A., i, 119.

**2**-*m*-**Tolylanthroxan**, 4-chloro-*p*-hydroxy-, and its alkali salts and acetyl derivative (ZINCKE and SIEBERT), 1906, A., i, 516.

*p*-**Tolylanthroxan** (KLIEGL), 1908, A., i, 550.

*o*-**Tolyl arabinoside** (RYAN and EBRILL), 1904, A., i, 223.

**Tolyl-5-arsenious oxide**, 2-amino- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1910, A., i, 84.

*o*-**Tolylarsinic acid**, 4-hydroxy- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1909, A., i, 280.

(*Toluene compounds, Me* = 1.)

*m*-**Tolylarsinic acid**, 4-amino- (Benda), 1910, A., i, 148.
  6-amino-, and its sodium salt and its *N*-acetyl derivative (Pyman and Reynolds), 1908, T., 1181; P., 143; (O. and R. Adler), 1908, A., i, 592.
  6-hydroxy-, sodium salt (Barrowcliff, Pyman, and Remfry), 1908, T., 1896.
  5-nitro-6-hydroxy- (Benda and Bertheim), 1912, A., i, 63.

*p*-**Tolylarsinic acid**, 2-chloro-, and 2-chloro-6-nitro- (Farbwerke vorm. Meister, Lucius, & Brüning), 1912, A., i, 595.

**Tolylarsinic acids**, amino-, and their acetyl derivatives (Benda and Kahn), 1908, A., i, 592.
  oxidation of (Kahn and Benda), 1909, A., i, 75.

2- and **3-Tolylarsinic acids**, 4-amino-, and sodium salt of the latter (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 531.

*p*-**Tolylauramine**, 2-amino- (Grandmougin and Lang), 1909, A., i, 974.

**Tolylaziminobenzoic acids**, 3:4-*o*- and -*p*- (Delétra and Ullmann), 1904, A., i, 270.

*p*-**Tolylaziminonaphthalene** and its picrate (Ullmann, Delétra, and Kogan), 1904, A., i, 776.

*p*-**Tolylazoacetoacetic acid**, menthyl ester (Lapworth), 1903, T., 1121; P., 149.

**Tolylazoacetoacetic acids**, *o*- and *p*-, ethyl esters, and their benzoylhydrazones (Bülow and Schaub), 1908, A., i, 705.

*p*-**Tolylazocyanoacetic acid**, menthyl ester, rotation of (Bowack and Lapworth), 1903, P., 23; 1904, T., 44.

*o*-**Tolylazoformaldoxime** (Busch and Wolbring), 1905, A., i, 494.

**Tolyl-5-azoformamide**, 2-amino- (Borsche and Reclaire), 1907, A., i, 988.

**Tolyl-5-** and **-6-azoformanilides**, 2- and 3-amino- (Borsche and Reclaire), 1907, A., i, 989.

*p*-**Tolylazoimide** (Dimroth and Pfister), 1910, A., i, 904.

*p*-**Tolylazothiolacetic acid** and its sodium salt (Friedländer and Chwala), 1907, A., i, 526.

**Tolylazo-**. See also Tolueneazo-.

*N*-*p*-**Tolylbenzaldoxime** hydrogen pentaiodide (?) (Beckmann, Ebert, Netscher, and Schulz), 1909, A., i, 654.

(*Toluene compounds, Me* = 1.)

*o*-**Tolylbenzenylamidine**, benzoyl derivatives (Wheeler, Johnson, and McFarland), 1903, A., i, 859.

1-*p*-**Tolyl-1:2:3-benzotriazole** (Borsche and Feise), 1907, A., i, 243.

*p*-**Tolylbenzoylalanine** (Dakin), 1911, A., ii, 416.

β-*p*-**Tolylbenzylhydrazine** and its hydrochloride and benzoyl derivative (Schlenk), 1908, A., i, 738.

1-*o*- and *p*-**Tolyl-4-benzylidenehydantoins** and 2-thio- (Johnson, Pfau, and Hodge), 1912, A., i, 807.

*o*-**Tolylbenzylidenehydrazine**, 5-iodo- (Fichter and Philipp), 1907, A., i, 83.

*p*-**Tolylbenzylidenehydrazine** (Schlenk), 1908, A., i, 738.

*p*-**Tolylbenzylmethylallylammonium** iodide and hydrogen tartrate, resolution of (Everatt and Jones), 1908, T., 1790; P., 212.

*p*-**Tolylbenzyl-methyl-** and **-ethyl-allylammonium** salts (Wedekind and Oberheide), 1904, A., i, 733.

*p*-**Tolylbenzylphthalamide** (Tingle and Brenton), 1909, A., i, 799.

*p*-**Tolylbenzylsulphone** (v. Meyer), 1910, A., i, 316.

*p*-**Tolyl-ψ-benzylthiocarbamide**, cyano- (Fromm and Weller), 1908, A., i, 703.

**Tolylbisdinaphthaxanthen**, *m*-amino- (Robyn), 1905, A., i, 608.

*m*-**Tolylboric acid** (Khotinsky and Melamed), 1909, A., i, 864.

*p*-**Tolyl-ω-bromoamylcyanamide** (v. Braun), 1907, A., i, 961.

β-*p*-**Tolylbutaldehyde** and its derivatives (Blaise and Picard), 1912, A., i, 233.

β-*m*-**Tolyl-$\Delta^{\beta}$-butenoic acid**, γ-cyano- (Guareschi), 1907, A., i, 1004.

*o*-**Tolyl-*tert.*-butyl alcohol** (Carré), 1909, A., i, 544.

*m*-**Tolyl-*tert.*-butyl alcohol** and its acetyl derivative (Carré), 1909, A., i, 544.

α-*m*-**Tolyl-$\Delta^{\alpha}$-butylene** and its dibromide (Grishkewitsch-Trochimowsky), 1908, A., i, 799.

β-*p*-**Tolyl-$\Delta^{\alpha}$-butylene** (Grishkewitsch-Trochimowsky), 1911, A., i, 291.

β-*p*-**Tolyl-$\Delta^{\beta}$-butylene** (Rupe and Bürgin), 1911, A., i, 447.

*p*-**Tolyl butyl ketone** and its oxime and semicarbazone (Layraud), 1906, A., i, 433.

*p*-**Tolyl** *iso***butyl ketone**, α-bromo- (Kunckell and Stahel), 1904, A., i, 387.

(*Toluene compounds, Me* = 1.)

*p*-**Tolyl butyl** and *iso***butyl ketones** (Willgerodt and Hambrecht), 1910, A., i, 118.

*o*-, *m*-, and *p*-**Tolyl** *iso***butyl ketones** and their semicarbazones (Senderens), 1911, A., i, 135.

γ **Tolylbutyric acids**, *o*-, *m*-, and *p*-, β-imino-α-cyano-, ethyl esters, and the action of cold concentrated sulphuric acid on (Atkinson and Thorpe), 1907, T., 1699 ; P., 216.

*p*-**Tolyl-butyric** and -*iso***butyric acids** and their amides (Willgerodt and Hambrecht), 1910, A., i, 118.

**Tolylcamphoformeneamine**, *o*-nitro- (Tingle and Hoffman), 1905, A., i, 800.

*p*-**Tolylcamphoformeneamine** and its acetyl derivative and **carboxylic acid** and its *p*-toluidine salt (Tingle and Hoffman), 1905, A., i, 799.

*m*-**Tolylcamphoformeneaminecarboxylic acid** and its *m*-toluidine salt (Tingle and Hoffman), 1905, A., i, 799.

*p*-**Tolylcamphoramic acids** α- and β-*cis*- and -*trans*- and imides of (Abati and de Notaris), 1909, A., i, 783.

**Tolylcarbamic acids**, *o*- and *p*-, calcium salts (Erdmann and van der Smissen), 1908, A., ii, 588.

**Tolylcarbamic hydrazides**, *o*- and *p*-, and their hydrochlorides and acetone, acetophenone, and *o*-hydroxybenzylidene compounds (Borsche), 1905, A., i, 306.

*p*-**Tolylcarbamide**, 2-iodo-, and its *N*-nitroso-derivative (Willgerodt and Gartner), 1908, A., i, 876.
  3-iodo- (Wheeler and Liddle), 1910, A., i, 17.

**Tolylcarbamides**, introduction of iodine into (Artmann), 1905, A., i, 878.
  action of nitrous acid on (Haager and Doht), 1906, A., i, 577.

*m*-**Tolylcarbimide** (Haager and Doht), 1906, A., i, 577.

*o*-**Tolylcarbinol**, preparation of (Tiffeneau and Delange), 1904, A., i, 48.
  alkyl ethers of (Farbenfabriken vorm. F. Bayer & Co.), 1905, A., i, 128.

3-*m*-**Tolyl***iso***carbostyril**, 2-amino- (Lieck), 1906, A., i, 49.

*o*-**Tolyl chlorobromomethyl ketone**, 5-amino-, and its acetyl derivative (Kunckell and Blumenreuter), 1912, A., i, 269.

(*Toluene compounds, Me* = 1.)

*m*-**Tolyl chlorobromomethyl ketone**, 6-amino-, and its acetyl derivative (Kunckell and Blumenreuter), 1912, A., i, 269.

*p*-**Tolyl chlorobromomethyl ketone**, 3-amino-, acetyl derivative (Kunckell), 1911, A., i, 991.

*m*-**Tolyl***di***chloroethyliodinium** hydroxide and salts (Willgerodt and Umbach), 1903, A., i, 745.

*p*-**Tolyl***tri***chloromethylcarbinol** and its acetate and benzoate (Dinesmann), 1905, A., i, 645.

*o*-**Tolyl chloromethyl ketone**, 4(or 6)-bromo-3-amino-, and its acetyl derivative (Kunckell and Blumenreuter), 1912, A., i, 269.
  5-chloro- (Kunckell), 1908, A., i, 729.

*m*-**Tolyl chloromethyl ketone**, 2-amino-, acetyl derivative (Kunckell and Blumenreuter), 1912, A., i, 269.
  5-amino-, acetyl derivative (Kunckell), 1911, A., i, 991.
  4-chloro-6-amino-, and its acetyl derivative (Kunckell and Lillig), 1912, A., i, 1027.
  6-hydroxy-, and its acetate (Fries and Finck), 1909, A., i, 42.

*p*-**Tolyl chloromethyl ketone**, 3-amino-, acetyl derivative (Kunckell), 1911, A., i, 991.

*o*-**Tolyl-1:3-***di***chlorophenyliodonium** hydroxide and its salts (Willgerodt and Böllert), 1910, A., i, 828.

α-*o*-**Tolylcinnamic acid**, 2-amino- and 2-nitro- (Pschorr and Hofmann), 1906, A., i, 849.

α-*p*-**Tolylcinnamic acid**, 2-amino- and 2-nitro- (Pschorr and Quade), 1906, A., i, 849.

4-*p*-**Tolylcinnoline** and its salts (Stoermer and Fincke), 1909, A., i, 843.

*m*-**Tolyl***iso***coumarin**, action of hydrazine on (Lieck), 1906, A., i, 49.

*p*-**Tolyl-***p***-cresetylthiocarbamide** (Jacobson and Hugershoff), 1904, A., i, 107.

β-*p*-**Tolylcrotonic acid** and its ethyl ester, and metallic salts (Matschurevitsch), 1909, A., i, 304.

*p*-**Tolyl-ψ-cumyliodonium hydroxide**, salts of (Willgerodt and Meyer), 1912, A., i, 22.

*m*-**Tolylcyanamide** (Pierron), 1907, A., i, 121.

*p*-**Tolyl cyanomethyl ketone** (Lublin : v. Meyer), 1907, A., i, 214.

**Tolyldesoxyn** and its oxidation (Nastukoff), 1907, A., i, 413.

(*Toluene compounds, Me* = 1.)

*N*-**Tolyldiacetonitriles**, *o*-, *m*-, and *p*- (v. Meyer and Schumacher), 1908, A., i, 909.

**Tolyldiazobisacetoximes**, *o*- and *m*- (Bresler, Friedemann, and Mai), 1906, A., i, 321.

**Tolyldiazohydroxylamino-*p*-toluene**, *o*-, *m*-, and *p*-, and bromo-derivatives (Gebhard and Thompson), 1909, T., 772, 1117.

**3-*p*-Tolyldihydro*iso*coumarin**, 4-bromo-4-cyano- (Gyr), 1907, A., i, 417.

**4-*o*-Tolyldihydrodioxatriazine**, 3:6-*di*hydroxy-, and its salts (Jovitschitsch), 1907, A., i, 99.

**α-*o*-Tolyl-3:4-dimethoxycinnamic acid**, 2-amino- and 2-nitro- (Pschorr and Tappen), 1906, A., i, 848.

**α-*p*-Tolyl-3:4-dimethoxycinnamic acid**, 2-amino- and 2-nitro- (Pschorr and Quade), 1906, A., i, 849.

**1-*p*-Tolyl-2:3-dimethylbenziminazolium** hydroxide, 4:7-*di*nitro-6-hydroxy-, and its salts (Meldola and Kuntzen), 1911, T., 1300.

**1-*p*-Tolyl-2:3-dimethylbenziminazolol**, 4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 1301.

**1-*p*-Tolyl-2:3-dimethylbenziminazolone**, 4:7-*di*nitro-6-hydroxy- (Meldola and Kuntzen), 1911, T., 1300.

**5-*o*-Tolyl-2:4-di-*o*-methylbenzylpyrimidine**, 6-amino- (Best and Thorpe), 1909, T., 266.

**5-*m*-Tolyl-2:4-di-*m*-methylbenzylpyrimidine**, 6-amino-, and its hydrochloride (Best and Thorpe), 1909, T., 268.

**5-*p*-Tolyl-2:4-di-*p*-methylbenzylpyrimidine**, 6-amino-, and its hydrochloride (Best and Thorpe), 1909, T., 271.

*o*-**Tolyldimethylcarbinol** (Kay and Perkin), 1905, T., 1071; (Tiffeneau), 1907, A., i, 305.

*m*-**Tolyldimethylcarbinol** (Perkin and Tattersall), 1905, T., 1090.

*m*-**Tolyldimethylcarbinol**, *o*-hydroxy- (Guillaumin), 1910, A., i, 477.
  6-hydroxy- (Fries and Fickewirth), 1908, A., i, 824.

*p*-**Tolyldimethylcarbinol** (Smirnoff), 1910, A., i, 104.
  and its phenylurethane (Perkin and Pickles), 1905, T., 652.

*p*-**Tolyldimethylcarbinol**, 2-hydroxy- (*hydroxythymol*) (Fries and Fickewirth), 1908, A., i, 824.

*p*-**Tolyldimethylcyanomethylammonium** iodide (v. Braun), 1908, A., i, 628.

(*Toluene compounds, Me* = 1.)

**3-*p*-Tolyl-1:6-dimethyl-3:4-di-** and **-1:2:3:4-tetra-hydroquinazolines** and their additive salts (v. Walther and Bamberg), 1906, A., i, 386.

**δ-*p*-Tolyl-αα-dimethyl-fulgenic acid** and **-fulgide** (Stobbe and Wahl), 1906, A., i, 22.

**5-*p*-Tolyl-5:5-dimethylhydantoin** (Bailey and Randolph), 1908, A., i, 742.

**δ-Tolyl-αα-dimethyl-$\Delta^{\beta}$-pentenoic acid** (Blaise and Courtot), 1906, A., i, 554.

**1-*o*-Tolyl-3:4-dimethylpyrazole**, 5-chloro- and its methiodide (Michaelis and Leo), 1910, A., i, 514.

**1-*p*-Tolyl-3:5-dimethylpyrazole**, 4-nitroso- (Sachs and Alsleben), 1907, A., i, 357.

**1-*o*-Tolyl-3:4-dimethyl-5-pyrazolone** (Michaelis and Leo), 1910, A., i, 514.

**1-*p*-Tolyl-2:3-dimethyl-5-pyrazolone**,
  fusion of, with toluenesulphonamides Voswinkel (1911), A., i, 498.
  compound of, with mercuric oxide (Eury), 1909, A., i, 57.

*p*-**Tolyldimethylsulphine hydroxide** and its salts (Kehrmann and Sava), 1912, A., i, 968.

*p*-**Tolyldimethylsulphonium** methyl sulphate (Auwers and Arndt), 1909, A., i, 644.

**3-*p*-Tolyl-2:5-dimethyltetrahydrofuran**, 3-hydroxy- (Dupont), 1912, A., i, 291.

*p*-**Tolyldimethyl-ψ-*di*thiomethylketuret** (Fromm and Schneider), 1906, A., i, 657.

α—N—α
**7-Tolyl-** | **-dinaphthacridines**,
β—CH—β
*o*-, *m*-, and *p*-, and their additive salts (Senier and Austin), 1907, T., 1235; P., 186.

**Tolyldinaphthaxanthen**, *o*- and *p*-amino- (Robyn), 1905, A., i, 608.

**Tolyldinaphthaxanthens**, hydroxy-, and their acetyl derivatives (Fosse), 1904, A., i, 336.

**4-*o*-Tolyldioxatriazine** and its salts and **5-carboxylic acid**, ethyl ester (Jovitschitsch), 1907, A., i, 99.

**4-*m*-Tolyldioxatriazine-5-carboxylic acid**, ethyl ester (Jovitschitsch), 1907, A., i, 99.

*p*-**Tolyldiphenylcarbamide**, thio- (v. Meyer and Heiduschka), 1903, A., i, 808.

(*Toluene compounds*, *Me* = 1.)

*p*-**Tolyl-ββ-dithiolvinyl ketone**, desaurin from (Kelber and Schwarz), 1912, A., i, 207.

*m*-**Tolylene***di***aminodi***iso***butyronitrile** and its amide (Bucherer and Grolée), 1906, A., i, 350.

**Tolylene-2:4-bisacetonylsulphone** (Tröger and Meine), 1904, A., i, 31.

**Tolylene-2:4-bisalkylsulphones** (Tröger and Meine), 1904, A., i, 31.

**Tolylene-2:4-bis-sulphone-acetic** and **-butyric acids** and their esters (Tröger and Meine), 1904, A., i, 31.

*m*-**Tolylenecarbamide**, preparation of (Kalle & Co.), 1904, A., i, 346.

**Tolylenediamine** poisoning (Joannovics and Pick), 1910, A., ii, 435.

**2:4-Tolylenediamine** and its acyl derivatives and 5-bromo- (Morgan and Clayton), 1905, T., 949.
  action of sulphur on (Schultz and Beyschlag), 1909, A., i, 269.
  monacyl derivatives, action of nitrous acid on (Morgan, Micklethwait, and Couzens), 1906, T., 1293; P., 240.
  formyl derivatives (Anilinfarben & Extrakt-Fabriken vorm. Geigy & Co.), 1903, A., i, 522.
  *N*-bistoluene-*p*-sulphonyl derivative (Oehler), 1905, A., i, 829.
  4:4′-oxalyl derivative (Farbwerke vorm. Meister, Lucius, & Brüning), 1905, A., i, 249.
  monothiocyanate (Farbwerke vorm. Lucius & Brüning), 1904, A., i, 870.

**2:4-Tolylenediamine**, 5-nitro-, azo-derivatives of (Morgan and Wootton), 1905, T., 940; P., 179.
  3:5-*di*nitro-, acetyl derivative of (Blanksma), 1911, A., i, 39.

**3:4-Tolylenediamine**, 4-*N*-acyl derivatives (Fichter and Rosenberger), 1907, A., i, 85.

**3:5-Tolylenediamine**, 2-amino-, *N*-(2)-acetyl derivative of (Farbenfabriken vorm. F. Bayer & Co.), 1907, A., i, 977.

**Tolylenediaminesulphonic acids** (Bückel), 1904, A., i, 532.

**Tolylenedicarbamide**, action of sulphur on (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 1062.

*p*-**Tolylenediglycine** and its nitrile (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 153.

*m*-**Tolylenedimalonamic acid**, ethyl ester (Meyer and v. Lutzau), 1906, A., i, 765.

(*Toluene compounds*, *Me* = 1.)

**Tolylenedimethyldiamine**, nitro- (Fischer and Hess), 1904, A., i, 195.

**Tolylene-3-4-dimethyldiamine** and its nitrosoamine, acetyl derivative of (Fischer and Römer), 1906, A., i, 539.

**Tolylene-3:5-dimethyldiamine**, 2:4-*di*- and 2:4:6-*tri*-nitro- (Blanksma), 1904, A., i, 566.

**Tolylene-4-dimethyl-2:4-diamine** (4-*N*-*dimethyl*-2:4-*tolylenediamine*), 5-bromo-, action of diazo-compounds on, and its acyl derivatives (Morgan and Clayton), 1905, T., 946; P., 182.
  interaction of, with *p*-nitrobenzene diazonium chloride (Morgan and Clayton), 1906, T., 1508.

*o*-**Tolylenediphthalimide** (Meyer and Jaeger), 1906, A., i, 767.

**1:2:4-Tolylenedisulphonacetonitrile** (Tröger and Hille), 1905, A., i, 337.

*o*-**Tolylenemalonamide** (Meyer and v. Lutzau), 1906, A., i, 765.

**2:4-Tolylene-4-*N*-methyldiamine** (p-*methylamino*-o-*toluidine*) and its sulphate (Gnehm and Schröter), 1906, A., i, 211.

**Tolylenemethyldiaminethiosulphonic acid** (Gnehm and Schröter), 1906, A., i, 212.

*o*-**Tolylene***iso***succinamide** (Meyer and Jaeger), 1906, A., i, 766.

**Tolylene-3:4-sulphonylide** (Auschütz), 1912, A., i, 852.

**Tolylene toluene-2:4-dithiosulphonate** (Tröger and Meine), 1904, A., i, 31.

*p*-**Tolylethoxymethylethylcarbinol** (Blaise and Picard), 1912, A., i, 232.

*p*-**Tolyl ethoxymethyl ketone** and its derivatives (Blaise and Picard), 1911, A., i, 175.

*s*-*p*-**Tolylethoxymethylthiocarbamide** (Johnson and Guest), 1909, A., i, 371.

*m*-**Tolylethyl alcohol**, acetyl derivative of (Carré), 1909, A., i, 544.

**Tolylethyl alcohols**, *o*- and *p*-, and their phenylurethanes (Grignard), 1905, A., i, 594.
  *o*-, *m*-, and *p*- (Kling), 1908, A., i, 980.

*p*-**Tolylethylallylcarbinol** (Grishkewitsch-Trochimowsky), 1910, A., i, 108.

β-*o*-**Tolylethylamine** and its salts (Emde), 1912, A., i, 802.
  and its salts, acetyl and *s*-thiocarbamide derivatives (Blumenfeld), 1907, A., i, 409.

(*Toluene compounds, Me* = 1.)

β-*m*-**Tolylethylamine**, 4-hydroxy-, and its derivatives (Barger and Ewins), 1910, T., 2257; P., 248.

*d*- and *l*-α-*p*-**Tolylethylamine** (Stenberg), 1910, A., i, 241.

β-*p*-**Tolylethylamine** and its salts (Ciesielski), 1907, A., i, 409.

**2-Tolylethylamino-5-methyl-4:5-dihydrothiazoles**, *o*- and *p*-, and their platinichlorides and oxidation (Young and Crookes), 1906, T., 73.

β-*p*-**Tolyl-β-ethylhydracrylic acid** and its silver and barium salts (Grishkewitsch-Trochimowsky), 1911, A., i, 290.

**2**-*o*- and -*p*-**Tolyl-3-ethyl***iso***indolinone**, 3-hydroxy- (Kuhara and Komatsu), 1911, A., i, 206.

*m*-**Tolyl ethyl ketone** and its oxime and semicarbazone (Wallach and Rentschler), 1908, A., i, 405.

*p*-**Tolyl ethyl ketone**, desaurin from (Kelber and Schwarz), 1912, A., i, 207.

*o*-, *m*-, and *p*-**Tolyl ethyl ketones**, preparation of, and their semicarbazones (Senderens), 1911, A., i, 134.

β-*m*-**Tolyl-α-ethylpropionic acid**, β-hydroxy-, synthesis and properties of, and its ethyl ester and salts (Grishkewitsch-Trochimowsky), 1908, A., i, 799.

β-*p*-**Tolyl-α-ethylpropionic acid**, β-hydroxy-, synthesis of, and its salts and ethyl ester (Matschurevitsch), 1907, A., i, 623.

**2**-*p*-**Tolylethylquinoline**, 5- and 8-amino-, and their additive salts (Schmidt), 1906, A., i, 39.

*p*-**Tolylethylsulphone** (v. Meyer), 1910, A., i, 316.

*tert.*-*o*- and -*p*-**Tolylfenchol** (Leroide), 1909, A., i, 596.

**9**-*m*-**Tolylfluorene**, *p*-hydroxy-, and its acetate (Bistrzycki and v. Weber), 1910, A., i, 743.

**9**-*m*-**Tolylfluorene-9-carboxylic acid**, *p*-hydroxy-, and lactones of *o*- and 6′-hydroxy- (Bistrzycki and v. Weber), 1910, A., i, 743.

**9**-*p*(?)-**Tolylfluorene-9-carboxylic acid**, *o*-hydroxy-, lactone of (Bistrzycki and v. Weber), 1910, A., i, 743.

β-*p*-**Tolylglutaric acid**, nitration of, and its 3-nitro-5-amino-derivative (Avery and Upson), 1908, A., i, 796.

**Tolylglycine.** See Toluidinoacetic acid.

*o*-**Tolylglycine-5-arsinic acid** (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 84.

(*Toluene compounds, Me* = 1.)

*o*-**Tolylglycinoacetic acid**, preparation of (de Mouilpied), 1905, T., 440; P., 63.

**Tolylglycollic acids.** See Tolyloxyacetic acids.

*m*-**Tolylglyoxylic acid**, 4-hydroxy-, and its anil (Fries and Finck), 1909, A., i, 43.
  hydrates of (Fries), 1909, A., i, 175.
  phenylhydrazone of, and its benzoyl derivative, and phenylhydrazone of its phenylhydrazide (Auwers and Apitz), 1911, A., i, 585.

*p*-**Tolylglyoxylic acid**, 3-hydroxy- (Fries and Finck), 1909, A., i, 44.
  hydrates of (Fries), 1909, A., i, 175.

*p*-**Tolylguanidine** and its nitrate (Kämpf), 1904, A., i, 534.

*p*-**Tolylguanido**-*p*-**tolyl**-ψ-**benzylthiocarbamide** (Fromm and Weller), 1908, A., i, 701.

*p*-**Tolylguanido**-*p*-**tolylthiocarbamide** and its acetyl derivative and its anhydro-compound (Fromm and Weller), 1908, A., i, 701.

*p*-**Tolyl heptadecyl ketone** (Ryan and Nolan), 1912, A., i, 750.

δ-*p*-**Tolyl-heptane**- and -*iso*-**heptane**-αβδ-**triol** (Grishkewitsch-Trochimowsky), 1911, A., i, 291.

**Tolyl***cyclo***hexanes**, *m*- and *p*- (Kursanoff), 1907, A., i, 600.

γ-*p*-**Tolylhexane**-γεζ-**triol** (Grishkewitsch-Trochimowsky), 1911, A., i, 290.

*p*-**Tolylhomocampholic acid**, hydroxy-, sodium salt (Haller), 1912, A., i, 359.

**3**-*p*-**Tolylhydantoic acid** and its ethyl ester (Bailey and Randolph), 1908, A., i, 741.

**1**-*o*- and -*p*-**Tolylhydantoins** (Johnson, Pfau, and Hodge), 1912, A., i, 807.

β-*o*-, -*m*-, and -*p*-**Tolylhydantoins** and their γ-alkyl compounds and their bromo-derivatives (Frerichs and Breustedt), 1903, A., i, 17.

**Tolyl-2-hydrazine**, 5-iodo- (Fichter and Philipp), 1907, A., i, 83.

*m*-**Tolylhydrazine** and its nitrile and its iminochloride and amidine (Farbenfabriken vorm. F. Bayer & Co.) 1906, A., i, 460.

**Tolylhydrazines**, *o*- and *p*-, oxidation of, by free oxygen (Chattaway), 1907, T., 1330; P., 183.

*m*-**Tolylhydrazinecarboxylic acid**, phenyl and methyl esters and imino-ethers (Farbenfabriken vorm. F. Bayer & Co.), 1906, A., i, 460.

**Tolylhydrazinoacetic acids**, *o*-, *m*-, and *p*-, and their benzylidene derivatives (Busch and Meussdörffer), 1907, A., i, 348.

*o*-**Tolylhydrazinomethylenemalonic acid**, ethyl ester (Michaelis and Ziesel), 1910, A., i, 513.

**Tolylhydrazonecyanoacetic acids**, *o*- and *p*-, ethyl esters, and their acetyl derivatives and amides (Weissbach), 1903, A., i, 541.

*p*-**Tolylhydrazonemesoxalylbishydrazonetoluene-*p*-azoacetoacetic acid**, ethyl ester (Bülow and Bozenhardt), 1910, A., i, 206.

*p*-**Tolylhydrizinoaminomethylenecarboxylic acid**, ethyl ester, and amide (Bowack and Lapworth), 1905, T., 1865.

*p*-**Tolylhydrizinohalogenmethylenecarboxylic acids**, ethyl esters (Bowack and Lapworth), 1905, T., 1863.

*m*-**Tolylhydroxylamine**, action of hydrochloric acid on (Bamberger and de Werra), 1903, A., i, 21; (Bamberger, Ter-Sarkissjanz, and de Werra), 1903, A., i, 25.

β-*p*-**Tolylhydroxylamine**, β-cyano-, and its iminochloride hydrochloride (Wieland, Roseeu, and Gambarjan), 1912, A., i, 907.

*p*-**Tolylidene chloride** (Auwers and Keil), 1903, A., i, 621.

*p*-**Tolylidene chloride**, 3:5-*di*nitro- (Gattermann), 1906, A., i, 589.

**Tolylideneacetone.** See Methylstyryl methyl ketone.

*p*-**Tolylidene-*p*-aminobenzoic acid** (Manchot and Furlong), 1910, A., i, 33.

*m*-**Tolylideneaniline**, *o*-hydroxy-, and its acetyl derivatives (Anselmino), 1907, A., i, 913.
  2-iodo- (Mayer), 1912, A., i, 478.

*p*-**Tolylideneaniline**, 6-hydroxy- (Anselmino), 1906, A., i, 14.

*o*-, *m*-, and *p*-**Tolylideneanilines** (Law), 1912, T., 158.

*p*-**Tolylideneanthranilic acid** (Wolf), 1910, A., i, 735.

*m*- and *p*-**Tolylidenecamphor**, preparation of (Haller and Bauer), 1909, A., i, 595.

*p*-**Tolylidenecarbamidoxime** (Conduché), 1906, A., i, 155.

*m*-**Tolylidene-*p*-chloroaniline** and -*o*- and -*p*-**toluidines**, 6-hydroxy- (Anselmino), 1906, A., i, 14.

*p*-**Tolylidenedeoxybenzoins**, isomeric, and their phenylhydrazone (Klages and Tetzner), 1903, A., i, 100.

2-*o*-**Tolylidenediketohydrindene** (Fecht), 1907, A., i, 907.

*p*-**Tolylidenedipyrrocoline** (Scholtz), 1912, A., i, 386.

*p*-**Tolylidenehydrazine**, benzoyl derivative, silver compound of (Stollé and Munch), 1905, A., i, 94.

*o*-**Tolylidenemalonic acid**, methyl ester (Meerwein), 1908, A., i, 90.

*m*-**Tolylidene-β-naphthylamines**, 2- and 6-hydroxy- (Senier, Shepheard, and Clarke), 1912, T., 1956.

*p*-**Tolylidenepicolide** (Scholtz), 1912, A., i, 386.

*m*-**Tolylidenerhodanic acid**, 4- and 6-hydroxy- (Bargellini), 1906, A., i 384.

*m*-**Tolylidene-*m*-toluidine**, 4-hydroxy- (Senier and Shepheard), 1909, T., 1952.

*m*-**Tolylidene-*m*- and -*p*-toluidines** (Law), 1912, T., 163.

*p*-**Tolylidene-*o*-, -*m*-,** and **-*p*-toluidines** (Law), 1912, T., 162.

*p*-**Tolylidenetriazoacetohydrazide** (Curtius and Bockmühl), 1912, A., i, 426.

*p*-**Tolylimino-*p*-chlorophenyl-*p*-chlorostyrylmethane**, isomeric forms of, and their picrates and hydrochlorides (Straus and Ackermann), 1910, A., i, 242.

**2-Tolylimino-5:5-diethylbarbituric acids**, *o*- and *p*- (Farbwerke vorm. Meister, Lucius, & Brüning), 1906, A., i, 987.

**2-*p*-Tolylimino-3:4-diphenyl-2:3-thiazoline** (v. Walther and Greifenhagen), 1907, A., i, 350.

**2-Tolylimino-3:4-ditolyl-2:3-thiazolines**, *o*-, *m*-, and *p*-, and their salts (v. Walther and Greifenhagen), 1907, A., i, 350.

**2-Tolylimino-5-methyltetrahydrothiazoles**, *o*- and *p*-, and their acetyl derivatives (Young and Crookes), 1906, T., 72.

**2:5-*p*-Tolylimino-1-phenyl-2:3-dimethylpyrazole**, *o*-nitro-, and its salts (Michaelis, Wurl, and Doepmann), 1911, A., i, 1041.

**2:5-*o*- and *p*-Tolylimino-1-phenyl-2:3-dimethylpyrazoles**, and their salts (Michaelis and Mentzel), 1911, A., i, 1042.

**5-*p*-Tolylimino-1-phenyl 3-methylpyrazolone** and its derivatives and 4-oximino-, and its hydrochloride (Michaelis and Risse), 1911, A., i, 1039.

(*Toluene compounds, Me* = 1.)

**Tolyliminotolylamino-.** See Toluidinotolylimino-.

*o*-**Tolylimino-*o*-tolyloxamic acid,** ethyl ester (Bauer), 1907, A., i, 603.

*o*-**Tolylimino-*p*-tolyl-*p*-tolutriazine** (Busch and Bergmann), 1905, A., i, 309.

*o*-**Tolylindigotin,** bromo-derivatives (Badische Anilin- & Soda-Fabrik), 1904, A., i, 1020.

**2-*o*-Tolyl*iso*indolinone,** 3-hydroxy- (Kuhara and Komatsu), 1911, A., i, 206.

*o*-, *m*-, and *p*-**Tolylmenthylbenzamidines** and their hydrochlorides and platinichlorides (Cohen and Marshall), 1910, T., 331.

*p*-**Tolylmercuric** bromide (Pope and Gibson), 1912, T., 736.

*s*-*p*-**Tolylmethoxymethylthiocarbamide** (Johnson and Guest), 1910, A., i, 730.

*p*-**Tolylmethylallylcarbinol** (Grishkewitsch-Trochimowsky), 1909, A., i, 151.

*m*-**Tolylmethylamine,** 6-nitro- (Tscherniac), 1903, A., i, 490.

*p*-**Tolylmethylaminoacetonitrile,** *m*-bromo-, and its platinichloride and picrate (v. Braun), 1908, A., i, 626.

**2-Tolylmethylamino-5-methyl-4:5-dihydrothiazoles,** *o*- and *p*-, and their platinichlorides and oxidation (Young and Crookes), 1906, T., 72.

**4-*p*-Tolyl-1-methylanthraquinone** (Seer and Karl), 1912, A., i, 572.

**4-*p*-Tolyl-1-methylanthrone-10** (Seer and Karl), 1912, A., i, 572.

**1-*o*-Tolyl-2-methylbenziminazole,** 4:7-*di*nitro-6-hydroxy-, and its silver salt, acetyl derivative, and ethyl ether (Meldola and Hay), 1908, T., 1672.

**1-*p*-Tolyl-2-methylbenziminazole,** 4:7-*di*nitro-6-hydroxy-, and its salts and ethyl ether (Meldola and Hay), 1908, T., 1673.

**β-*p*-Tolyl-γ-methyl-$\Delta_\alpha$-butylene** (Grishkewitsch-Trochimowsky), 1911, A., i, 291.

*o*-, *m*-, and *p*-**Tolyl-α-methyl*iso*butyramide** (Haller and Bauer), 1911, A., i, 726.

**α-*p*-Tolyl-α-methylbutyric acid,** synthesis of (Rupe and Bürgin), 1911, A., i, 446.

*o*-, *m*-, and *p*-**Tolyl-α-methyl*iso*butyric acids** (Haller and Bauer), 1911, A., i, 726.

(*Toluene compounds, Me* = 1.)

*p*-**Tolylmethylcarbinol** and its phenylurethane (Klages and Keil), 1903, A., i, 554.

**γ-*p*-Tolyl-γ-methyl*iso*crotonic acid** (Rupe and Steinbach), 1911, A., i, 293.

*o*-**Tolylmethylcyanamide** (v. Braun), 1908, A., i, 685.

*p*-**Tolylmethylcyanamide** (v. Braun), 1908, A., i, 626.

**5-Tolyl-10-methyldihydroacridines,** *o*-, *m*-, and *p*-, 5-hydroxy-, and their ethers (Schmid and Decker), 1906, A., i, 305.

**3-*p*-Tolyl-6-methyl-3:4-dihydro-β-phenotriazine** and its salts (v. Walther and Bamberg), 1905, A., i, 299.

**1-*p*-Tolyl-2-methyl-4:5-dihydropyrrole** salts (Markwalder), 1907, A., i, 638.

**3-*p*-Tolyl-6-methyl-3:4-di-** and **-1:2:3:4-tetra-hydroquinazolines** and their additive salts (v. Walther and Bamberg), 1906, A., i, 385.

**3-*p*-Tolyl-2-methyl-4-dihydroquinazolone,** and dinitro- (Bogert and Geiger), 1912, A., i, 396.
  methiodide (Bogert and Geiger), 1912, A., i, 511.

**1-*p*-Tolyl-6-** and **-7-methyl-1:2-dihydro-2-quinoxalones** and their carboxylic acids (Kühling and Kaselitz), 1906, A., i, 464.

**5-*p*-Tolyl-2-methyldiphenylmethane-2′-carboxylic acid** (Seer and Karl), 1912, A., i, 572.

*p*-**Tolylmethylethylallylammonium** salts (Wedekind and Oberheide), 1904, A., i, 732.

*p*-**Tolylmethylethylcarbinol** and its polymeride (Rupe and Bürgin), 1911, A., i, 446.

*o*-**Tolyl-1-methyl-3-ethylphenyl-4-iodinium** hydroxide and salts (Willgerodt and Brandt), 1904, A., i, 658.

*o*-**Tolyl-2-methyl-4-ethylphenyliodonium** hydroxide and its salts (Willgerodt and Jahn), 1912, A., i, 22.

*p*-**Tolylmethylethylsulphonium** methyl sulphate (Auwers and Arndt), 1909, A., i, 645.

**Tolylmethylfurfuraldehyde** (Fenton and Robinson), 1909, T., 1338.

*p*-**Tolylmethylglycidic acid,** ethyl ester (Darzens), 1907, A., i, 179.

**2-*o*-Tolyl-1-methyl-$\Delta^2$-*cyclo*hexene** (Murat), 1909, A., i, 147.

**β-*p*-Tolyl-α-methylhydracrylic acid** and its ethyl ester and silver and sodium salts (Strschalkovsky), 1909, A., i, 304.

(*Toluene compounds, Me* = 1.)
**β-*p*-Tolyl-β-methylhydracrylic acid** (Matschurevitsch), 1909, A., i, 304.
  metallic salts (Grishkewitsch-Trochimowsky), 1909, A., i, 151.
***o*-Tolyl-*o*-methylimesatin** (v. Ostromisslensky), 1908, A., i, 82.
***p*-Tolyl-*p*-methylimesatin** (v. Ostromisslensky), 1908, A., i, 889.
***p*-Tolylmethylketazine** (Curtius and Kof), 1912, A., i, 733.
***m*-Tolyl methyl ketone**, condensation of, with naphthaldehydic acid (Wiechowski), 1905, A., i, 707.
***m*-Tolyl methyl ketone**, 2-hydroxy-, phenylhydrazone of, and its derivatives (Auwers and Dannehl), 1909, A., i, 441.
***p*-Tolyl methyl ketone** (p-*acetyltoluene*) (Thomae and Lehr), 1907, A., i, 138.
  and its semicarbazone (Auwers), 1905, A., i, 434.
  action of ammonia on (Thomae and Lehr), 1907, A., i, 139.
  action of carbon disulphide and potassium hydroxide on (Kelber and Schwarz), 1911, A., i, 740.
  and allyl iodide, action of magnesium on a mixture of (Grishkewitsch-Trochimowsky), 1909, A., i, 151.
  and ethyl bromoacetate, action of zinc on a mixture of (Matschurevitsch), 1909, A., i, 304.
***p*-Tolyl methyl ketone**, *o*-chloro-, and its oxime and semicarbazone (Wallach and Lautsch), 1906, A., i, 523.
  1:6-*di*hydroxy-. See Orcacetophenone.
**Tolyl methyl ketones**, *o*- and *p*- (Eykman, Bergema, and Henrard), 1905, A., i, 360.
  *m*- and *p*-, hydroxy-, and their derivatives (Anschütz and Scholl), 1911, A., i, 316.
  *o*-, *m*-, and *p*-, and their oximes and semicarbazones (Tiffeneau), 1907, A., i, 305.
    preparation of, and their semicarbazones (Senderens), 1911, A., i, 134.
**6-*p*-Tolyl-3-methylnaphthalene** (Auwers and Keil), 1904, A., i, 26.
**6-*o*-Tolyl-1-methyl-5:7-naphthylenediamine** and its dihydrochloride and diacetyl derivative (Best and Thorpe), 1909, T., 266; P., 29.
**6-*m*-Tolyl-2-methyl-5:7-naphthylenediamine** and its dihydrochloride and diacetyl derivative (Best and Thorpe), 1909, T., 269; P., 29.

(*Toluene compounds, Me* = 1.)
**7-*p*-Tolyl-2-methyl-6:8-naphthylenediamine** and its dihydrochloride and diacetyl derivative (Best and Thorpe), 1909, T., 272; P., 29.
***p*-Tolylmethylnitrosoamine**, 2:5-*di*nitro-, and 2:3:6-*tri*nitro- (Morgan and Clayton), 1911, T., 1942.
**Tolylmethylphthalimide**, *o*-, *m*-, and *p*-nitro- (Tscherniac), 1903, A., i, 490.
**Tolyl-2-methylpiperidide**, *di*bromo- (Hildebrandt), 1905, A., i, 155.
**1-*o*-Tolyl-3-methylpyrazole**, 4-bromo- (Michaelis and Käding), 1910, A., i, 516.
  5-chloro-, and its additive salts (Michaelis and Eisenschmidt), 1904, A., i, 624.
**1-Tolyl-5-methylpyrazoles**, *o*- and *p*-, 3-chloro-, and their methiodides (Michaelis and Behrens), 1905, A., i, 380.
**1-*p*-Tolyl-3-methylpyrazole-4-azobenzene** and its 5-chloro-, 5-nitro-, 5-thio-, 5-thioalkyl-, 5-phenylsulphone, and 5-thiobenzoate derivatives, and 5-sulphide (Michaelis, Leonhardt, and Wahle), 1905, A., i, 395.
**1-*p*-Tolyl-5-methylpyrazole-4-azobenzene**, 3-chloro- (Michaelis and Behrens), 1905, A., i, 397.
**1-*p*-Tolyl-3-methylpyrazole-4-*p*-azotoluene** and its 5-chloro- and 5-thio-derivatives (Michaelis, Leonhardt, and Wahle), 1905, A., i, 395.
**1-*p*-Tolyl-3-methylpyrazole-5-sulphonic acid** and its derivatives (Michaelis and Dulk), 1908, A., i, 692.
**1-*p*-Tolyl-3-methyl-5-pyrazolidone-3-carboxylic acid** and its *p*-tolylhydrazide (Fichter and Füeg), 1907, A., i, 83.
**1-*p*-Tolyl-3-methylpyrazolone**, 5-thio-, and its derivatives (Michaelis and Dulk), 1908, A., i, 691.
**1-*o*-Tolyl-3-methyl-5-pyrazolone**, iodo-, and its isonitroso-derivative (Fichter and Philipp), 1907, A., i, 84.
**1-*p*-Tolyl-3-methyl-5-pyrazolone**, 4-*iso*nitroso- (Fichter and Füeg), 1907, A., i, 83.
**1-*p*-Tolyl-4-methyl-3-pyrazolone** (Fichter and Vortisch), 1907, A., i, 82.
**1-*p*-Tolyl-5-methyl-3-pyrazolone**, 4-amino-, and its acyl derivatives, and compounds with aldehydes and ketones, 4-nitro-, and 4-nitroso- (Michaelis and Kotelmann), 1907, A., i, 156.

(*Toluene compounds, Me* = 1.)

**1-Tolyl-5-methyl-3-pyrazolones**, *o*- and *p*-, and their salts, benzoyl, and benzylidene derivatives (Michaelis and Behrens), 1905, A., i, 380.

**Tolyl-5-methyl-3-pyrazolone-4-azobenzenes**, 1-*o*- and -*p*- and their salts and benzenesulphonyl derivatives (Michaelis and Behrens), 1905, A., i, 396.

**2-*p*-Tolyl-4-methylpyrimidine**, 6-amino-, 6-chloro-, 6-thio-, 6-thiocyano- and 6-thiocarbamido-derivative (Johnson, Storey, and McCollum), 1908, A., i, 838.

**1-Tolyl-2-methylpyrrolidone-2-carboxylic acids**, *o*-, *m*-, and *p*-, and their esters, salts, amides, aminoximes, and nitriles (Kühling and Falk), 1905, A., i, 372.

**3-Tolyl-2-methyl-4-quinazolone**, *m*- and *p*-amino-, 3:7-*di*amino-, and 3-amino-7-acetylamino- (Bogert, Gortner, and Amend), 1911, A., i, 581.

***p*-Tolyl-6-methylquinolyl-8-iodonium** hydroxide and its salts (Willgerodt), 1905, A., i, 548.

***p*-Tolylmethylsulphone** (v. Meyer), 1910, A., i, 316.

**4-Tolyl-2-methylsulphoxide**, 5-bromo-4-iodo- (Zincke and Rollhaüser), 1912, A., i, 551.

**3-*p*-Tolyl-6-methyl-1:2:3:4-tetrahydro-2-quinazolone** and its dicarbamide derivative (v. Walther and Bamberg), 1906, A., i, 387.

**1-*p*-Tolyl-5-methyl-1:2:3:4-tetrazole** (Dimroth and de Montmollin), 1910, A., i, 899.

***p*-Tolyl-mono- and -di-methyl-ψ-thiocarbamides** and their hydriodides (Johnson and Bristol), 1903, A., i, 752.

**3-*o*- and -*p*-Tolyl-6-methyl-2-thio-1:2:3:4-tetrahydroquinazolones** (Senier and Shepheard), 1909, T., 503.

***m*-Tolyl naphthalidomethyl ketone** and its pseudo-acid, oxime, and phenylhydrazone (Wiechowski), 1905, A., i, 708.

**Tolylnaphthalimides**, *o*-, *m*-, and *p*- (Bargellini), 1905, A., i, 210.

**2-*p*-Tolylnaphthatriazole** (Charrier), 1910, A., i, 287.

**3-*p*-Tolyl-β-naphtha*iso*triazoles** (Morgan and Bramley), 1910, P., 151.

***p*-Tolyl-α-naphthylamine**, 2:4-*di*nitro- (Morgan and Micklethwait), 1912, P., 325.

***o*-Tolyl-β-naphthylamine**, *p*-chloro- (Knoll & Co.), 1912, A., i, 345.

(*Toluene compounds, Me* = 1.)

***m*-Tolyl-β-naphthylamine** (Knoll & Co.), 1912, A., i, 345.

***p*-Tolyl-β-naphthylamine**, thio- (Ackermann), 1910, A., i, 728.

*o*-, *m*-, and ***p*-Tolyl-α-naphthylamines** (Knoll & Co.), 1912, A., i, 345.

***p*-Tolyl-α-naphthylamine-8-sulphonic acid** (Aktien-Gesellschaft für Anilin Fabrikation), 1905, A., i, 717.

***p*-Tolyl-α-naphthylamine-6- and -7-sulphonic acids** (Aktien-Gesellschaft für Anilin-Fabrikation), 1905, A., i, 770.

*s*-***p*-Tolyl-α-naphthylcarbamide** (Senier and Shepheard), 1909, T., 502.

*b*-***p*-Tolyl-α-α-naphthylcarbamide**, α-hydroxy- (Scheiber and Beckmann), 1908, A., i, 725.

***p*-Tolyl-1:2-naphthylenediazoimines.** See 3-*p*-Tolyl-β-naphtha*iso*triazoles.

***p*-Tolyl-α-naphthylmethylcarbinol** (Schurakovsky), 1910, A., i, 169.

**Tolyl*iso*nitroacetonitriles**, *o*-, *m*-, and *p*-, sodium derivatives (Wislicenus and Wren), 1905, A., i, 284.

***N*-*p*-Tolyl-*o*-nitrobenzaldoxime** (Beckmann, Ebert, Netscher, and Schulz), 1909, A., i, 654.

***p*-Tolyl-*m*-nitrobenzaldoxime** (Plancher and Piccinini), 1905, A., i, 706.

***p*-Tolylnitromethane.** See *p*-Xylene, ω-nitro-.

***o*-Tolylnitrosoamine**, *N*-benzoyl derivative (Jacobson and Huber), 1908, A., i, 299.

**3-*p*-Tolyl*iso*oxazolidone**, 2-hydroxy- (Posner and Oppermann), 1907, A., i, 56.

**3-*p*-Tolyl*iso*oxazole-5-one** and 4-isonitroso- (Posner and Oppermann), 1907, A., i, 56; (Lublin), 1907, A., i, 213.

**Tolyloxide**, sodium, condensation of, with phenyl and tolyl esters of α-bromo-fatty acids (Bischoff, Bihmann, Gussew, Smolnikoff, and Wachtsmuth), 1907, A., i, 32.

***m*-Tolyloxide**, aluminium (Cook), 1907, A., i, 126.

**Tolyloxides**, nitro-, alkali, relations between the colour, composition, and constitution of the (Frazer), 1903, A., i, 817.

**Tolyloxyacetic acids** (*tolylglycollic acids*), *o*-, *m*-, and *p*-, nitro-derivatives of, and 3-amino-, of the para-acid (Kernot), 1905, A., i, 286.

***p*-Tolyloxyacetone**, *o*-nitro- (König and Becker), 1912, A., i, 497.

(*Toluene compounds, Me* = 1.)

β-*o*-**Tolyloxy-β-amyl-** and **-β-phenyl-acrylamides** (Moureu and Lazennec), 1906, A., i, 432.

1-*p*-**Tolyloxyanthraquinone** (Decker, v. Fellenberg, and Stern), 1907, A., i, 1066.

**Tolyloxybenzoic acids,** *o*- and *p*- (Aktien-Gesellschaft für Anilin-Fabrikation), 1905, A., i, 780.
*o*-, *m*-, and *p*- (Ullmann and Zlokasoff), 1905, A., i, 597.

α-**Tolyloxy**-*n*- and -*iso*-**butyric, -propionic,** and -*iso***valeric acids,** *o*-, *m*-, and *p*-tolyl esters (Bischoff, Bihmann, Gussew, and Smolnikoff), 1907, A., i, 33.

α-*p*-**Tolyloxycinnamic acid** and the action of heat on (Stoermer and Biesenbach), 1905, A., i, 525.

4-**Tolyloxy-4:7-dimethylhydrocoumarin** (Fries and Klostermann), 1908, A., i, 822.

α-*m*-**Tolyloxy-β-furylacrylic acid** and its anhydride, phenyl ester, and aniline salt (Paladino), 1904, A., i, 180.

*o*-**Tolyloxy-β-phenylacrylonitrile** (Moureu and Lazennec), 1906, A., i, 276.

α-*p*-**Tolyloxy-β-phenylhydracrylic acid** (Stoermer and Biesenbach), 1905, A., i, 525.

α-*m*-**Tolyloxypropane,** γ-chloro-β-hydroxy-, and its phenylurethane (Marle), 1912, T., 312.

α-*o*- and -*p*-**Tolyloxypropanes,** γ-chloro-β-hydroxy-, and their phenylurethanes (Boyd and Marle), 1910, T., 1790; P., 208.

β′-*o*-**Tolyloxy***iso***propyl alcohol,** β-amino-, and its salts and benzoyl derivative (Boyd and Knowlton), 1909, T., 1804; P., 235.

*p*-**Tolyloxystyrene** (Stoermer and Biesenbach), 1905, A., i, 525.

6-*p*-**Tolyloxy**-*m*-**toluic acid** (Fosse and Robyn), 1903, A., i, 647.

*p*-**Tolylpentadecylcarbinol** and its derivatives (Ryan and Nolan), 1912, A., i, 750.

*p*-**Tolyl pentadecyl ketone,** derivatives of (Ryan and Nolan), 1912, A., i, 749.

β-*p*-**Tolylpentane-βδε-triol** (Grishkewitsch-Trochimowsky), 1909, A., i, 151.

*p*-**Tolyl phenoxymethyl ketone** and its oxime and **sulphonic acid** (Stoermer and Atenstädt), 1903, A., i, 41.

(*Toluene compounds, Me* = 1.)

*p*-**Tolyl**-*p*-**phenetylthiocarbamide** (Jacobson and Hugershoff), 1904, A., i, 107.

**Tolyl phenylamyl ketone** (v. Braun and Deutsch), 1912, A., i, 688.

*p*-**Tolyl** δ-**phenylbutadiene ketone** and its oxime (Scholtz and Wiedemann), 1903, A., i, 436.

*p*-**Tolylphenylcarbamic acid,** thio-, ethyl ester (v. Meyer and Heiduschka), 1903, A., i, 808.

*p*-**Tolylphenylcarbamide,** thio- (v. Meyer and Heiduschka), 1903, A., i, 808.

*p*-**Tolyl**-*o*-**phenylenediamine,** benzoyl derivative of (Borsche and Feise), 1907, A., i, 243.

*p*-**Tolylphenylmethanedicarboxylic acid** and its dimethyl ester (Liebermann and Rahts), 1912, A., i, 466.

*p*-**Tolylphenyl-1:3:4-oxadiazole** and its silver nitrate derivative (Stollé and Münch), 1905, A., i, 95.

*p*-**Tolylphenyloxamic acid,** thio-, ethyl ester, and amide (v. Meyer and Heiduschka), 1903, A., i, 808.

*p*-**Tolylphthalamic acid,** benzylamine salt (Tingle and Brenton), 1909, A., i, 799.

**Tolylphthalamic acids,** *m*- and *p*-, and the benzylamine salts of the *m*-acid (Tingle and Rolker), 1909, A., i, 29.

*m*-**Tolylphthalimide** (Tingle and Rolker), 1909, A., i, 29.

*as*-*o*- and -*p*-**Tolylphthalimides** (Kuhara and Komatsu), 1911, A., i, 206.

1-*p*-**Tolylpiperidine,** action of cyanogen bromide on (v. Braun), 1907, A., i, 960.

**Tolylpiperidylcarbamide,** nitro- (Bouchetal de la Roche), 1904, A., i, 189.

**Tolylpiperidylcarbamides,** *o*- and *p*- (Bouchetal de la Roche), 1903, A., i, 574.

*p*-**Tolylpiperidylurethane,** 3-bromo- (Bouchetal de la Roche), 1903, A., i, 776.

α-*p*-**Tolylpropaldehyde,** isolation of, from terpinene (Henderson and Cameron), 1909, T., 973; P., 151.

β-*p*-**Tolylpropaldehyde** and its semicarbazone (Auwers), 1906, A., i, 962.

*p*-**Tolylpropiolic acid** (Gattermann), 1906, A., i, 590.

β-*p*-**Tolylpropionamide** (Buchner and Schulze), 1911, A., i, 52.

α-*p*-**Tolylpropionic acid,** α-amino-, nitrile, hydrochloride of (Jaweloff), 1906, A., i, 427.

*α-p*-**Tolylpropionic acid**, *ββ-di*chloro-, and its ethyl ester (Auwers), 1911, A., i, 299.

*β-o*-**Tolylpropionic acid**, β-imino-*α*-cyano-, ethyl ester, and its conversion into ethyl 1:3-naphthylenediamine-2-carboxylate (Atkinson, Ingham, and Thorpe), 1907, T., 585 ; P., 76.

*β-p*-**Tolylpropionic acid**, *β*-amino- and its benzoyl derivative, and *β*-hydroxy- (Posner and Oppermann), 1907, A., i, 56.
  *αβ-di*bromo-, ethyl ester (Gattermann), 1906, A., i, 589.
  *β*-hydroxy-, synthesis of, and its ethyl ester and salts (Andriewsky), 1908, A., i, 799.
  *β*-hydroxylamino-, constitution and derivatives of (Posner and Oppermann), 1907, A., i, 55.

*β-p*-**Tolylpropionitrile**, *β*-imino-, action of amyl nitrite on (Lublin), 1904, A., i, 890.

*m*-**Tolyl*iso*propyl alcohol** and its acetyl and benzoyl derivatives (Carré), 1909, A., i, 544.

*p*-**Tolyl-propyl-** and -*iso***propyl-carbinols** (Grishkewitsch-Trochimowsky), 1910, A., i, 109.

*β-p*-**Tolylpropylene** *αβ*-**glycol** and its transformation product (Tiffeneau), 1907, A., i, 405.

*β-p*-**Tolyl-*β*-propylhydracrylic acid** and its barium and sodium salts (Grishkewitsch-Trochimowsky), 1911, A., i, 291.

*β-p*-**Tolyl-*β*-*iso*propylhydracrylic acid** and its salts (Grishkewitsch-Trochimowsky), 1911, A., i, 291.

*p*-**Tolyl propyl ketone**, and its phenyl hydrazone (Willgerodt and Hambrecht), 1910, A., i, 118.

*o*-, *m*-, and *p*-**Tolyl propyl ketones**, and their semicarbazones (Senderens), 1911, A., i, 134.

*o*-, *m*-, and *p*-**Tolyl *iso*propyl ketones**, and their semicarbazones (Senderens), 1911, A., i, 135.

1-*o*-**Tolylpyrazole**, 5-chloro- (Michaelis and Ziesel), 1910, A., i, 513.

1-*o*-**Tolyl-5-pyrazolone** (Michaelis and Ziesel), 1910, A., i, 513.

1-*p*-**Tolylpyridinium chloride**, 3-hydroxy-, and its platinichloride (Zincke and Mühlhausen), 1906, A., i, 33.

3-**Tolylpyrines**, *o*- and *p*-, and their hydrochlorides and picrates (Michaelis and Behrens), 1905, A., i, 380.

**Tolylpyrroles**, 1-*o*-, 1-*p*-, 2-*o*-, and 2-*p*- (Pictet and Long), 1904, A., i, 772.

*p*-**Tolylpyruvic acid** and its azlactone (Wakeman and Dakin), 1911, A., ii, 416.

*p*-**Tolylpyruvic acid**, *ωβ-di*cyano-, ethyl ester and derivatives (Wislicenus and Penndorf), 1910, A., i, 560.

3-*m*-**Tolylquinoxaline**, 2:4′-*di*hydroxy- (Fries and Finck), 1909, A., i, 43.

3-*p*-**Tolylquinoxaline**, 2:3′-*di*hydroxy- (Fries and Finck) 1909, A., i, 44.

*p*-**Tolylquinoxanthenol** chloride hydrochloride (Gomberg and Cone), 1910, A., i, 56.

3-*m*-**Tolylrhodanic acid** and its condensation with aldehydes (Andreasch), 1908, A., i, 683.

3-*o*- and -*p*-**Tolylrhodanic acids** and their condensation with aldehydes (Andreasch and Zipser), 1905, A., i, 931 ; (Stuchetz), 1905, A., i, 933.

*o*-**Tolyl*iso*rosindone**, amino- (7-*o-tolylisorosindoneoxime*) (Fischer and Arntz), 1907, A., i, 95.

10-*o*-**Tolylsafranol**, 7-hydroxy- (Heller), 1912, A., i, 917.

*N-o*-**Tolylsalicylaldoxime** and its hydrogen tri-iodide (Beckmann, Ebert, Netscher, and Schulz), 1909, A., i, 654.

*N-p*-**Tolylsalicylaldoxime** and its hydrogen pentaiodide (Beckmann, Ebert, Netscher, and Schulz), 1909, A., i, 653.

*m*-**Tolylsemicarbazide**, preparation of (Farbenfabriken vorm. F. Bayer & Co.), 1905, A., i, 383, 949 ; 1906, A., i, 459.

3-*p*-**Tolyl-2-styryl-4-dihydroquinazolone** (Bogert and Beal), 1912, A., i, 394.
  methiodide (Bogert and Geiger), 1912, A., i, 511.

*m*-**Tolyl styryl ketone** (*cinnamenyl m-tolyl ketone*) (Mayer), 1905, A., i, 357.

*m*-**Tolyl styryl ketone**, *p*-hydroxy-, and its dibromide, oxime, and acetyl derivative (Neurath), 1907, A., i, 221.

**Tolylsuccinimide**, *m*-amino- (Meyer and v. Lutzau), 1903, A., i, 766.

**Tolylsulphon-**. See Toluenesulphon-.

*p*-**Tolylsulphonealkyl alcohols** (Kohler and Reimer), 1904, A., i, 233.

*β-p*-**Tolylsulphone-propionic acid** and -*β*-**phenylpropionic acid** (Kohler and Reimer), 1904, A., i, 234.

*p*-**Tolylsulphonepyrotartaric acid** (Kohler and Reimer), 1904, A., i, 234.

(*Toluene compounds, Me* = 1.)

*p*-**Tolylsulphone-*p*-tolylsulphoxyethane** (Fromm and Raiziss), 1910, A., i, 554.

*p*-**Tolylsulphonic acid,** menthyl ester (Hilditch), 1911, T., 238.

*p*-**Tolylsulphonoacetanilide** (v. Meyer and Heiduschka), 1903, A., i, 809.

*p*-**Tolylsulphonphenyloxamide** *p*-tolylsulphonate and its acetyl and *m*-nitro-derivatives (Reverdin and Dresel), 1905, A., i, 51.

*o*-**Tolylsulphoxidoacetic acid,** *p*-chloro- (Farbenwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 379.

and its homologues (Kalle & Co.), 1909, A., i, 477.

*p*-**Tolyltartronic acid,** methyl and ethyl esters (Guyot and Estéva), 1909, A., 237.

*p*-**Tolyltaurine** and its salts (Wolfbauer), 1904, A., i, 869.

**1-*p*-Tolyl-1:2:3:4-tetrazole** (Dimroth and de Montmollin), 1910, A., i, 898.

*p*-**Tolylthioacetamide** (Ciesielski), 1907, A., i, 409.

**Tolyl-ψ-thiobenzylcyanocarbamides,** *o*- and *p*- (Fromm and Schneider), 1906, A., i, 657.

**Tolyl-*di*thiobiurets,** *o*- and *p*-, and their reaction with methyl iodide and **Tolylthiouret** hydriodides (Fromm and Schneider), 1906, A., i, 657.

**Tolylthiocarbamide,** amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 869.

*p*-**Tolylthiocarbamide,** action of methyleneaniline on (Senier and Shepheard), 1909, T., 505.

*p*-**Tolyl-ψ-thiocarbamide** and its salts and nitroso- (Arndt), 1911, A., i, 918.

**2-*o*-Tolylthiocarbamidoazo-*p*-toluene** (Busch and Bergmann), 1905, A., i, 309.

*s*-**1-Tolylthiocarbamido-1:3:4-triazole** (Bülow), 1909, A., i, 681.

*m*-**Tolyl*di*thiocarbaminacetic acid,** ethyl ester (Andreasch), 1908, A., i, 683.

*o*-**Tolylthiolacetic acid,** *m*-amino- (Kalle & Co.), 1912, A., i, 452.

*m*-**Tolylthiolacetic acid,** 4:6-*di*chloro- (Kalle & Co.), 1912, A., i, 770.

*p*-**Tolylthiolacetic acid,** preparation of (Kalle & Co.), 1908, A., i, 605.

bromide and dibromide (Pummerer), 1909, A., i, 580.

*o*- and *m*-**Tolylthiolacetic acids,** 4-chloro- (Kalle & Co.), 1912, A., i, 557.

(*Toluene compounds, Me* = 1.)

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1-*o*- and -*p*-**Tolylthiolanthraquinones** (Gattermann), 1912, A., i, 1002.

**1-*p*-Tolylthiolanthraquinone-2-carboxylic acid** (Badische Anilin- & Soda-Fabrik), 1912, A., i, 468.

*p*-**Tolylthiolanthraquinone-5-, -6-,** and **-8-sulphonic acids,** potassium salts (Gattermann), 1912, A., i, 1002.

**4-Tolylthiolanthraquino-1-thiazole** (Gattermann), 1912, A., i, 1005.

**2-*p*-Tolylthiolbenzoic acid,** new preparation of (Goldberg), 1905, A., ii, 59.

**4-*p*-Tolylthiol-1-methylthiolanthraquinone** (Gattermann), 1912, A., i, 1003.

*p*-**Tolylthiopyrine** (Michaelis and Dulk), 1908, A., i, 691.

**3-Tolylthiopyrines,** *o*- and *p*-, and their methiodides (Michaelis and Behrens), 1905, A., i, 380.

**Tolylthioureas,** *o*- and *p*-, action of acyl chlorides on (Dixon and Hawthorne), 1907, T., 136; (Dixon and Taylor), 1907, T., 919; P., 120.

*p*-**Tolylthiuret,** action of aromatic amines and hydrazines on (Fromm and Weller), 1908, A., i, 701.

*m*-**Tolyl-*m*-** and **-*p*-toluidines** and their hydrochlorides (Law), 1912, T., 163.

*p*-**Tolyl-*o*-, -*m*-,** and **-*p*-toluidines** and their hydrochlorides (Law), 1912, T., 162.

*p*-**Tolyl δ-*p*-tolylbutadiene ketone,** and its oxime (Scholtz and Wiedemann), 1903, A., i, 437.

*p*-**Tolyl-*o*-tolylcarbamic acid,** thio-, ethyl ester (v. Meyer and E. Meyer), 1903, A., i, 810.

*p*-**Tolyl-*o*-tolylcarbamide,** thio- (v. Meyer and E. Meyer), 1903, A., i, 810.

**2-Tolyl-*o*-tolyliodonium** salts, 4-nitro- (Willgerodt and Kok), 1908, A., i, 620.

*p*-**Tolyl-*o*-tolyloxamic acid,** thio- (v. Meyer and E. Meyer), 1903, A., i, 810.

*p*-**Tolyl-*m*-tolyloxamic acid,** thio-, ethyl ester (v. Meyer and E. Meyer), 1903, A., i, 810.

*p*-**Tolyl-*m*-tolylphenyl-carbamide** and **-thiocarbamide,** thio- (v. Meyer and E. Meyer), 1903, A., i, 810.

*p*-**Tolyl-*o*-tolylphenyl-carbamide, -thiocarbamide,** and **-oxamide,** thio- (v. Meyer and E. Meyer), 1903, A., i, 810.

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δ-*o*- and -*p*-**Tolyl**-β-*m*- and α-*m*-**tolylthiosemicarbazides,** and their α-*m*-nitrobenzylidene derivative (Busch and Reinhardt), 1910, A., i, 76.
1-*p*-**Tolyl-1:2:3-triazole,** 5-hydroxy-, and its **4-carboxylic acid** (Dimroth and Stahl), 1905, A., i, 385.
1-*p*-**Tolyl-1:2:3-triazole-4-carboxylic acid,** 5-hydroxy-, ethyl ester, and its amine salts (Dimroth and Stahl), 1905, A., i, 385.
1-*p*-**Tolyl-1:2:3-triazol-5-one-4-carboxylic acid** and its ethyl ester (Dimroth and Stahl), 1905, A., i, 385.
*p*-**Tolyltrimethylammonium** bromide and its perbromides (Fries), 1906, A., i, 649.
  methyl sulphates, *o*- and *p*- (Ullmann), 1903, A., i, 395.
1-*p*-**Tolyl-2:4:6-trimethylpyridinium** perchlorate (v. Baeyer and Piccard), 1911, A., i, 901.
*p*-**Tolyltriphenylmethylsulphone** (v. Meyer and Fischer), 1911, A., i, 121.
*o*-**Tolyl-6-urethane,** 2:4-*di*bromo-3-hydroxy- (Raiford), 1911, A., i, 993.
*p*-**Tolyl-4-urethane,** 2:6-*di*bromo-3-hydroxy- (Raiford), 1911, A., i, 993.
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*p*-**Tolylurethaneacetamide** (A. and L. Lumière and Barbier), 1906, A., i, 245.
γ-**Tolylvaleric acid** (Eykman), 1904, A., i, 669.
γ-*p*-**Tolylvaleric acid** and its *p*-toluidide (Rupe and Steinbach), 1911, A., i, 293.
*p*-**Tolyl-valeric** and -*iso***valeric acids,** and their amides (Willgerodt and Hambrecht), 1910, A., i, 118.
γ-*p*-**Tolyl**-γ-**valerolactone** (Rupe and Steinbach), 1911, A., i, 293.
9-*o*-**Tolyl-xanthen, -xanthen-9-ol,** and **-xanthonium** ferrichloride (Decker, v. Fellenberg, and Dinner), 1907, A., i, 1065.
*p*-**Tolylxanthenol** and its chloride and peroxide (Gomberg and Cone), 1910, A., i, 56.
*m*-**Tolyl** *m*-**4-xylyl ketone** (Seer), 1911, A., i, 386.
*p*-**Tolyl**-*p*-**xylyloxamide** (Suida), 1910, A., i, 665.
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**Toxic effects** of eserine, effect of magnesium on (Joseph), 1909, A., ii, 170.

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**Toxicodendrin** (Acree and Syme), 1906, A., ii, 795.

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**Toxin** and toxin-antitoxin combinations in presence of serum proteins, action of salts on (Pick and Schwarz), 1909, A., ii, 598.
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**Toxin-antitoxin reaction**, physical chemistry of the (Craw), 1905, A., ii, 747.

**Toxin-lecithide**, nature of (Michaelis and Rona), 1907, A., i, 667.

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**Transference number**, determination of a, in the electrolysis of a fused salt (Lorenz and Fausti), 1904, A., ii, 699.

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**Transformation**, law of, in stages and radioactivity (Schmidt), 1908, A., ii, 550.

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*p*-**Triazobenzaldehydephenylhydrazone** (Forster and Judd), 1910, T., 260.

*p*-**Triazobenzaldoxime** (Forster and Dunn), 1909, T., 430.

*p*-**Triazobenz**-*anti*- and -*syn*-**aldoximes** and methyl ether and benzoyl derivative of the former (Forster and Judd), 1910, T., 257 ; P., 28.

**Triazobenzene** (*phenylazoimide*), syntheses with (Dimroth), 1903, A., i, 127, 450.

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*o*-**Triazobenzonitrile** (Forster and Judd), 1910, T., 262.

*p*-**Triazobenzylidene**-*p*-**aminophenol** (Forster and Judd), 1910, T., 260 ; P., 28.

α-**Triazobutan**-β-**one** and its semicarbazone, and its oxime and its *p*-toluenesulphonyl derivative, and γ-**Triazobutan**-β-**one** and its semicarbazone (Forster and Fierz), 1908, T., 675 ; P., 54.

α-**Triazobutyric acid** and its ethyl ester, silver and brucine salts and amide and the resolution of the brucine salt, ethyl ester and the amide, and *l*- (Forster and Müller), 1909, T., 193.

α-**Triazo***iso***butyric acid** and its ethyl ester, silver and potassium salts and amide (Forster and Müller), 1909, T., 196.

γ-**Triazobutyric acid** and its derivatives (Curtius and Giulini), 1912, A., i, 427.

γ-**Triazobutyrylazoimide** (Curtius and Giulini), 1912, A., i, 427.

α-**Triazo**-γ-**chloro***iso***propyl alcohol** (Forster and Withers), 1912, T., 494.

**Triazo-compounds**, refraction and dispersion of (Philip), 1908, T., 918 ; P., 114 ; 1912, T., 1866 ; P., 226.
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*i*-, *l*-, and *d*-**Triazodihydrocarvones** and their semicarbazones (Forster and van Gelderen), 1911, T., 2063 ; P., 195.

α-**Triazoethane**, β-bromo-, β-chloro-, and β-iodo-. See Triazoethyl bromide, chloride and iodide.

**Triazoethyl alcohol** (β-*triazoethanol*) and its acetate and *p*-nitrobenzoate (Forster and Fierz), 1908, T., 1865 ; P., 227.

**Triazoethyl** bromide, chloride, and iodide (Forster and Newman), 1910, T., 2576 ; P., 322.

α-**Triazoethylacetoacetic acid**, ethyl ester and its semicarbazone (Forster and Newman), 1910, T., 1365 ; P., 197.

β-**Triazoethylamine**, and its hydrochloride and benzoyl derivative (Forster and Newman), 1911, T., 1278 ; P., 154.

β-**Triazoethylcarbamide** (Forster and Newman), 1911, T., 1281 ; P., 154.

β-**Triazoethyl ether** (Forster and Newman), 1910, T., 2579 ; P., 322.

**Triazoethylene** (*vinylazoimide*), preparation of, and its dibromide (Forster and Newman), 1910, T., 2574 ; P., 322.

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β-**Triazoethylphthalimide** (Forster and Newman), 1911, T., 1279 ; P., 154.

β-**Triazoethylquinolinium** iodide and platinichloride (Forster and Newman), 1911, T., 1282.

α- and β-**Triazoethylurethanes** (Curtius and Franzen), 1912, A., i, 427.

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ω-**Triazogallacetophenone** (Barger and Ewins), 1910, T., 2260.

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- **1:2-, 1:3-, and 1:4-Triazo-iodo-, -iodoso-, and iodoxy-benzenes** (Forster and Schaeppi), 1912, T., 1361.
- **Triazole** and its derivatives (Pellizzari), 1911, A., i, 1035.
  - from azoimide (Dimroth and Fester), 1910, A., i, 645.
  - derivatives from dinitriles (v. Meyer and Schumacher), 1908, A., i, 912.
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  - aminohydroxy-, bromo-, iodo-, and nitrohydroxy- (Manchot and Noll), 1906, A., i, 213.
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- **1:2:3-Triazole,** 1-amino-, derivatives of (Wolff and Hall), 1904, A., i, 120.
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  - diazo-derivatives of (Manchot), 1910, A., i, 442.
- **1:2:5-Triazole,** 1-amino-, and its picrate and hydrochloride, and benzoyl derivative (v. Pechmann and Bauer), 1909, A., i, 271.
- **1:3:4-Triazole,** 1-amino- (*trimethinetriazoimide*, N-*dihydrotetrazine*) (Curtius, Darapsky, and Müller), 1907, A., i, 360, 451; (Stollé), 1907, A., i, 654.
  - and its **2:5-dicarboxylic acid** (Bülow), 1906, A., i, 905.
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  - the amino-group of, and its formyl and metallic derivatives (Bülow), 1909, A., i, 680.
  - 1-amino-2-hydroxy-, and its benzylidene derivative (Stollé), 1907, A., i, 655.
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- **1:2:3-Triazole-1-acetic acid,** 5-hydroxy-, hydrazonium salt of (Curtius and Welde), 1910, A., i, 787.
- **1:2:3-Triazole-1-acetylglycinehydrazide,** 5-hydroxy-, and its salts and benzylidene derivative (Curtius and Callan), 1910, A., i, 788.
- **1:2:3-Triazole-1-acetylhydrazide,** 5-hydroxy-, and its salts and derivatives (Curtius and Welde), 1910, A., i, 787.
- **1:2:3-Triazole-4-carboxylic acid,** 5-hydroxy-, and its methyl ester, and its metallic derivatives (Dimroth and Aickelin), 1907, A., i, 159.
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- **1:3:4-Triazole-2:5-dicarboxylic acid,** 1-amino- (1:4-*dihydrotetrazine*-3:6-*dicarboxylic acid*) (Bülow), 1907, A., i, 100; (Curtius, Darapsky, and Müller), 1907, A., i, 360, 450.
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- **Triazoline-4-acetic acid,** 1-hydroxy-, and its barium derivative (H. and A. v. Euler), 1904, A., i, 197.
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**α-Triazo*iso*valeric acid** and its ethyl ester, silver salt, and amide (Forster and Müller), 1909, T., 198.

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- **Tribenzoylphenylhydrazine** (Lockemann and Liesche), 1906, A., i, 112.
- **Tribenzoylphloroglucinol** dimethyl and diethyl ethers (Fischer), 1910, A., i, 249.
- s-**Tribenzoyl*cyclo*propanes**, synthesis of (Paal and Schulze), 1903, A., i, 710.
- **Tribenzoylquinides** (Echtermeier), 1906, A., i, 368.
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- **Tribenzylacetone**, *tri-p*-nitro-, and its **dicarboxylic acid**, ethyl ester (Fichter and Wortsmann), 1904, A., i, 592.
- **Tribenzylammonium** *di-* and *penta*-iodides, preparation of (Silberrad and Smart), 1906, T., 173 ; P., 19.
- **Tribenzylcarbinol** (Sachs and Loevy), 1903, A., i, 592, 820 ; (Houben), 1903, A., i, 826 ; (Klages and Heilmann), 1904, A., i, 488.
- **Tribenzyldecacyclene**, synthesis of (Dziewoński and Dotta), 1904, A., i, 803.
- **Tribenzylethylstannane** (Smith and Kipping), 1912, T., 2560 ; P., 314.
- **Tribenzylhydrazine** hydrochloride (Franzen and Kraft), 1911, A., i, 817.
- **Tribenzylidenehydrazinoacethydrazide** (Curtius and Hussong), 1911, A., i, 400.
- **Tribenzylidenehydrazinodiacethydrazide** and *m*-chloro-, and *m*-nitro- (Curtius and Hussong), 1911, A., i, 400.
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- **Tricamphorylarsinic acid** and its silver salt (Morgan and Micklethwait), 1909, T., 1473 ; P., 212.
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**Tri-*o*-carbomethoxyphenylmelamine** (McKee), 1912, A., i, 140.

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**3:4:6-Trimethoxyphenanthrene-9-carboxylic acid** and its salts (Pschorr, Seydel, and Stöhrer), 1903, A., i, 167.

**3:4:8-Trimethoxyphenanthrene-9-carboxylic acid**, 5-bromo-, and its methyl ester (Knorr and Hörlein), 1909, A., i, 919.

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**3:4:5-Trimethoxyphenylacetic acid** (*methyliridic acid: trimethylhomogallic acid*), synthesis of (Mauthner), 1908, A., i, 986.
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**2:3:4-Trimethoxyphenylglyoxylic acid** and its amide (Mauthner), 1909, A., i, 161.

**3:4:5-Trimethoxyphenylglyoxylic acid** and its phenylhydrazone and amide (Mauthner), 1908, A., i, 348.

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**2:4:5-Trimethoxyphenyl 3:4-methylenedioxystyryl ketone** (Bargellini and Avrutin), 1911, A., i, 68.

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**2(2′:4′:5′)-Trimethoxyphenyl-β-naphthacinchonic acid** (Fabinyi and Széki), 1906, A., i, 423.

**α-Trimethoxyphenyl-β-naphthacinchonic acid** (Mauthner), 1908, A., i, 729.

**2:4:5-Trimethoxyphenyl-α-naphthylcarbinol** (Széki), 1909, A., i, 920.

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**2:3:4-Trimethoxy-β-phenylpropionic acid** and its ethyl ester (Barger and Ewins), 1910, T., 2259.

**2:4:5-Trimethoxy-β-phenylpropionic acid** and its methyl ester (Moore), 1911, T., 1048; P., 120.

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**2:4:5-Trimethoxyphenylpropylcarbinol** (Széki), 1909, A., i, 920.

**3:4:5-Trimethoxyphenylpyruvic acid** and its oxime (Mauthner), 1908, A., i, 986.

**2:4:5-Trimethoxyphenyl-*p*-tolylmethyl ether** (Széki), 1909, A., i, 919.

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**2:4:5-Trimethoxystyryl methyl ketone** (Fabinyi and Széki), 1906, A., i, 422.
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**2:4:6-Trimethyldihydropyridine**, 3:5-*di*cyano- (v. MEYER and KLEINSTÜCK), 1908, A., i, 910.

**4:5:6-Trimethyldihydro-2-pyrimidone** salts (DE HAAN), 1908, A., i, 578.

**1:2:2-Trimethyldihydroquinoline** and its picrate (FREUND and RICHARD), 1909, A., i, 418.

**1:1:2-Trimethyldihydroresorcin** and its anilide and anhydride (CROSSLEY and RENOUF), 1911, T., 1105.
  action of phosphorus pentachloride on (CROSSLEY and HILLS), 1906, T., 875; P., 144.

**Trimethyldihydroresorcincarboxylic acid** (CROSSLEY and RENOUF), 1911, T., 1106.

**1:4:5-Trimethyldihydrouracil**, 4-bromo-5-hydroxy-, chlorohydroxy-, and 4:5-*di*hydroxy- (BREMER), 1911, A., i, 161.

**Trimethylene** *di*bromide, behaviour of, towards zinc dust and acetic acid (ZELINSKY and SCHLESINGER), 1908, A., i, 594.
  action of water on (RIX), 1904, A., i, 465.
  chlorobromide and dibromide (BRUYLANTS), 1909, A., i, 198.
  chlorohydrin (HENRY), 1907, A., i, 377.

**Trimethylene** *di*cyanide, condensation of, with ethyl oxalate (Michael), 1903, A., i, 736.

glycol. See Propane, *di*hydroxy-.

*cyclo***Trimethylene.** See *cyclo*Propane.

**Trimethyleneasparagine** (H. and A. v. Euler), 1905, A., ii, 343.

**Trimethylene-bis-(phenyldimethylammonium iodide)** (E. and O. Wedekind), 1910, A., i, 835.

**Trimethylene-bis-(phenylmethylethylammonium iodide)**, two isomerides and their derivatives (E. and O. Wedekind), 1910, A., i, 834.

**Trimethylenecarbinol.** See *cyclo*Propylcarbinol.

**Trimethylenecarboxylic acid.** See *cyclo*Propanecarboxylic acid.

**2:3-Trimethylenecinchonic acid** (Borsche, Schmidt, Tiedtke, and Rottsieper), 1910, A., i, 884.

**Trimethylenediamine.** See Propylenediamine.

**3:3′-Trimethylenedibenzo*spiro*pyran** (Borsche and Geyer), 1912, A., i, 894.

**Trimethylenedi-methyl- and -ethyl-anilines.** See Diphenyl-diethyl- and -dimethyl-propylenediamines.

**Trimethylene-ethylenedipiperidylium** bromide and its stereoisomeride (Aschan), 1904, A., i, 350.

**Trimethylene-*l*-iditol** (Bertrand and Lanzenberg), 1906, A., i, 729.

**Trimethyleneiminesulphonic acid** (Gabriel and Colman), 1906, A., i, 890.

*peri*-**Trimethylenenaphthalene** and its picrate (Langstein), 1910, A., i, 727.

*peri*-**Trimethylenenaphthalic acid** and its anhydride (Langstein), 1910, A., i, 727.

**1:1-Trimethylenepiperidinium** iodide and hydroxide, and decomposition of the latter by heat (Dunlop), 1912, T., 1998; P., 230.

**Trimethylenepyrrole,** derivatives of (Ghiglieno), 1910, A., i, 427, 505; 1911, A., i, 321.

**2:3-Trimethylenequinoline** and its salts (Borsche, Schmidt, Tiedtke, and Rottsieper), 1910, A., i, 884.

**2-Trimethylenetetrahydro*iso*quinolinium salts** (Jones and Dunlop), 1912, T., 1753; P., 221.

**Trimethylenetriamine,** *tri*amino-, attempts to prepare (Stollé), 1907, A., i, 496.

**Trimethylenetrisulphone,** action of, on formaldehyde (Reychler), 1907, A., i, 476.

**Trimethylene-trisulphone** and **-disulphonesulphide** (Peters), 1905, A., i, 625.

**Trimethylenetrisulphoxide** and its derivatives (Hinsberg), 1912, A., i, 546.

**Trimethyleneureine,** action of concentrated nitric acid on (Franchimont and Friedmann), 1907, A., i, 877.

**1:3:6-Trimethyl-8-ethylallantoin,** 7-thio- (Biltz and Krebs), 1911, A., i, 242.

**Trimethylethylammonium** *per*chlorate (Hofmann, Roth, Höbold, and Metzler), 1910, A., i, 818.

auri- and platini-chlorides (Rollett), 1910, A., i, 824.

iodide, compound of thiocarbamide and (Atkins and Werner), 1912, T., 1990.

*per*iodides (Strömholm), 1903, A., i, 462.

**1:2:4-Trimethyl-5-ethylbenzene** and its **sulphonic acid** (Klages and Keil), 1903, A., i, 554.

**Trimethylethylene.** See β-Methyl-$\Delta^{\beta}$-butylene.

**1:1:5-Trimethyl-2-ethylene-4:5-*cyclo*pentene** (Bouveault and Blanc), 1903, A., i, 613.

**1:2:4-Trimethyl-4-ethyl-$\Delta^{1:5}$-*cyclo*hexadien-6-ol,** 3-cyano-, and its carbonate and benzoyl derivative (Gardner and Haworth), 1909, T., 1960.

**1:2:4-Trimethyl-4-ethyl-$\Delta^{1}$-*cyclo*hexenecarboxylic acid,** 6-imino-3-cyano- (Gardner and Haworth), 1909, T., 1959.

**1:3:3-Trimethyl-2-ethylidene-indoline** and its salts (Plancher and Bonavia), 1903, A., i, 434.

**1:3:3-Trimethyl-2-ethylindoline** and its picrate (Plancher and Bonavia), 1903, A., i, 434.

**4:4:6-Trimethyl-3-ethyltetrahydro-1:3-oxazine** and its salts (Kohn), 1904, A., i, 933.

**2:4:4-Trimethyl-1-ethyltrimethyleneimine** and its additive salts (Kohn and Morgenstern), 1907, A., i, 681.

**Trimethylfructosemonoacetone** (Irvine and Garrett), 1910, T., 1283.

**Trimethylfurandicarboxylic acid** (Trefilieff), 1907, A., i, 1063.

**Trimethylgallaldehyde.** See Gallaldehyde, trimethyl ether.

**Trimethylgallic acid.** See Gallic acid, trimethyl ether.

**2-Trimethylgalloylcoumaran** and its leuco-compound (v. Kostanecki, Lampe, and Marschalk), 1907, A., i, 951.

*p*-**Trimethylgalloyl-*o*-ethylanisole** and its leuco-compound (v. KOSTANECKI, LAMPE, and MARSCHALK), 1907, A., i, 952.

**Trimethyl glucose.** See Dextrose methyl ethers.

**ααγ-Trimethylglutaconic acid,** esters (BLAISE), 1903, A., i, 548.
*cis*- and *trans*-, and the anhydride of the *cis*-acid (PERKIN and SMITH), 1904, T., 155; P., 10.
*trans*-, synthesis of (PERKIN and SMITH), 1903, T., 777; P., 163.

**αβγ-Trimethylglutaconic acid** and its silver salt, anhydride, and ester, and α-cyano-, ethyl ester (ROGERSON and THORPE), 1905, T., 1702; P., 239.
derivatives of (THOLE and THORPE), 1911, T., 2239.

*N*-**Trimethylglutamic acid,** salts of (NOVÁK), 1912, A., i, 338.

**ααγ-Trimethylglutaric acid** (*hexanedicarboxylic acid*), synthesis of, and its βγ-dibromo- and β-hydroxy-derivatives (PERKIN and SMITH), 1903, T., 771; P., 163.

**ααγ-Trimethylglutaric acid,** *cis*-βγ-*di*bromo- (PERKIN and SMITH), 1904, T., 156; P., 10.
β-imino-α-cyano-, ethyl ester (BARON, REMFRY, and THORPE), 1904, T., 1755.

**Trimethylglutarimide** (BLAISE and COURTOT), 1906, A., i, 793.

**1:4:5-Trimethylglyoxaline** and 2-bromo-, and their additive salts (JOWETT), 1905, T., 405; P., 116.

**2:4:5-Trimethylglyoxaline,** 1-iodo- (PAULY), 1910, A., i, 639.

**ααβ-Trimethylguanidine** aurichloride (SCHENCK), 1911, A., i, 843.
platinichloride (SCHENCK), 1912, A., i, 685.

**αβγ-Trimethylguanidine** and its aurichloride and platinichloride (SCHENCK), 1910, A., i, 99.

**ααβ-** and **αβγ-Trimethylguanidines,** salts of (SCHENCK), 1912, A., i, 425.

**βδζ-Trimethyl-$\Delta^{\beta\epsilon}$-heptadien-δ-ol** (v. FELLENBERG), 1904, A., i, 961.

**βδζ-Trimethylheptan-δ-ol** (BODROUX and TABOURY), 1909, A., i, 546.

**Trimethylheptatriene.** See βζ-Dimethyl-δ-methylene-βε-heptadiene.

**Trimethyl-*n*-heptylammonium** hydroxide and iodide (v. BRAUN), 1911, A., i, 611.

**1:1:2-Trimethyl-$\Delta^{2:4}$-*cyclo*hexadiene,** 3:5-*di*chloro- (CROSSLEY), 1903, P., 227; (CROSSLEY and HILLS), 1906, T., 880; P., 144.

**1:1:4-Trimethyl-$\Delta^{2:5}$-*cyclo*hexadien-4-ol** (AUWERS and MÜLLER), 1911, A., i, 621.

**1:1:5-Trimethyl-$\Delta^{2:4}$-*cyclo*hexadien-3-ol-6-carboxylic acid,** 2:6-*di*cyano-, ethyl ester and its benzoyl derivative (GARDNER and HAWORTH), 1909, T., 1958.

**2:2:6-Trimethylhexahydrobenzaldehyde** (SKITA and PAAL), 1911, A., i, 449.

**γγδ-Trimethylhexane,** δ-hydroxy-. See Methylethyl*tert.*-amylcarbinol.

**1:1:3-Trimethyl*cyclo*hexane** (SKITA and RITTER), 1911, A., i, 272.

**1:1:3-Trimethyl*cyclo*hexane,** 3-bromo- (CROSSLEY and GILLING), 1910, T., 2220.

**2:6:6-Trimethyl*bicyclo*[0, 1, 3]hexane** (KIJNER), 1912, A., i, 758.

**2:6:6-Trimethyl*cyclo*hexane-1-carbinol,** 4-hydroxy- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1904, A., i, 412.

**2:6:6-Trimethyl*cyclo*hexanecarboxylic acid,** 4-amino-, ethyl ester, hydroxide and iodide of (MERLING, WELDE, EICHWEDE, and SKITA), 1909, A., i, 482.
*cis*- and *trans*-4-amino-, ethyl esters, and their derivatives, and 4-hydroxy-, ethyl ester (SKITA), 1907, A., i, 1040.
4-chloro-, and 4-bromo-, ethyl esters (MERLING, WELDE, EICHWEDE, and SKITA), 1909, A., i, 481.

**βγε-Trimethylhexane-βγε-triol** (RICHARD and LANGLAIS), 1910, A., i, 456.
synthesis and derivatives of (BOUVEAULT and LOCQUIN), 1911, A., i, 2; (BOUVEAULT and LEVALLOIS), 1911, A., i, 3.

**ββδ-Trimethylhexan-γ-ol** and its phenylurethane (HALLER and BAUER), 1910, A., i, 220.

**βδδ-Trimethylhexan-γ-ol** and its phenylurethane (HALLER and BAUER), 1910, A., i, 300.

**1:1:5-Trimethyl*cyclo*hexanol** (MASSON), 1912, A., i, 280.

**1 1:2-Trimethyl*cyclo*hexan-3-ol** and its benzoyl derivatives (CROSSLEY and RENOUF), 1911, T., 1109.

**1:1:3-Trimethyl*cyclo*hexan-3-ol** (CROSSLEY and GILLING), 1910, T., 2220; P., 252.

**2:6:6-Trimethyl*cyclo*hexan-4-ol-1-carboxylic acid,** and its lactone and ethyl ester (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), 1904, A., i, 411.

**2:6:6-Trimethyl*cyclo*hexan-4-ol-1-carboxylic acids,** isomeric, and their lactones (Merling, Welde, and Skita), 1905, A., i, 349.

**ββδ-Trimethylhexan-γ-one** (Haller and Bauer), 1910, A., i, 220.

**βδδ-Trimethylhexan-γ-one** (Haller and Bauer), 1910, A., i, 300.

**1:1:5-Trimethyl*cyclo*hexanone** and its derivatives (Masson), 1912, A., i, 280.

**1:1:2-Trimethyl*cyclo*hexan-3-one** and its oxime and semicarbazone (Crossley and Renouf), 1911, T., 1110; P., 137.

**1:1:4-Trimethyl*cyclo*hexan-5-one** and its semicarbazone (Blanc), 1907, A., i, 221, 710; 1908, A., i, 655.

**1:4:4-Trimethyl*cyclo*hexan-5-one.** See Pulenone.

**Trimethyl*cyclo*hexanones,** 2:4:4- and 3:5:5-, oximes of (Wallach), 1906, A., i, 514.

**2:6 6-Trimethyl*cyclo*-hexan-** and **-$\Delta^4$-hexen-4-one-1-carboxylic acids** and their ethyl esters (Farbwerke vorm. Meister, Lucius, & Brüning), 1904, A., i, 412.

**1:1:3-Trimethyl*cyclo*hexene.** See *cyclo*-Geraniolene.

**1:1:3-Trimethyl-$\Delta^5$-*cyclo*hexene,** 5-chloro- (Skita and Ritter), 1911, A., i, 272.

**1:3:3-Trimethyl-$\Delta^4$-*cyclo*hexene-2-carboxylic acid.** See $\Delta^4$-*cyclo*Geranic acid.

**1:1:4-Trimethyl-$\Delta^3$-*cyclo*hexene-2:5-dione** and its derivatives (Bamberger and Blangey), 1911, A., i, 884.

**ααε-Trimethyl-$\Delta^\delta$-hexenol** and its ozonide (Harries and Weil), 1904, A., i, 361.

**1:3:3-Trimethyl-$\Delta^1$-*cyclo*hexen-6-ol,** and its acetate (Bougault), 1910, A., i, 254.

**1:3:5-Trimethyl-$\Delta^3$-*cyclo*hexen-5-ol** (Auwers and Peters), 1910, A., i, 826.

**Trimethyl*cyclo*hexenone,** chloro-, and its derivatives (Crossley and Renouf), 1911, T., 1106.

**1:1:5-Trimethyl-$\Delta^4$-*cyclo*hexen-3-one.** See *iso*Phorone.

**1 4:4-Trimethyl-$\Delta^5$-*cyclo*hexen-3-one.** See βγ-Pulenenone.

**2:6:6-Trimethyl-$\Delta^2$-*cyclo*hexen 4-one-1-carboxylic acid.** See *iso*Phoronecarboxylic acid.

**Trimethylhexylammonium** hydroxide and iodide (v. Braun), 1911, A., i, 611.

**Trimethylhomogallaldehyde.** See 3:4:5-Trimethoxyphenylacetaldehyde.

**Trimethylhomogallic acid.** See 3:4:5-Trimethoxyphenylacetic acid.

**3:5:5-Trimethylhydantoin** (Bailey and Randolph), 1908, A., i, 742.

**1:7:9-Trimethyl*spiro*-5:5-hydantoin** (*hypocaffeine*), and its decomposition (Biltz and Krebs), 1911, A., i, 240.

***p*-Trimethylhydrobenzamide** (Francis), 1909, A., i, 589.

**γ-Trimethyl-β-hydroxybutyrobetaine.** See *dl-iso*Carnitine.

**Trimethyl-β-hydroxy-β-methylbutylammonium** bromide and iodide, and their benzoyl derivatives (Riedel), 1908, A., i, 607.

**1:2:3-Trimethylindole,** action of chloroform on (Plancher and Carrasco), 1905, A., i, 666.

**1:2:5-Trimethylindole**(Farbenfabriken vorm. F. Bayer & Co.), 1903, A., i, 516.

**2:3:5-Trimethylindole** (Grgin), 1906, A., i, 884.

**2:3:3-Trimethylindolenine,** Plancher's constitution of (Konschegg), 1905, A., i, 925.

  action of Grignard's reagent on (Plancher and Ravenna), 1907, A., i, 152.

**3:3:5-Trimethyl-indolenine** and its salts and -**indolinone** (Grgin), 1906, A., i, 884.

**3:8:5-Trimethylindolenine-2-formamidoxime** and **-2-formonitrile** (Plancher and Carrasco), 1909, A., i, 959.

**Trimethylindoline-2-ones,** 3:3:5- and 3:3:7-, and their bromo- and metallic derivatives (Brunner), 1907, A., i, 240.

**4:5:7-Trimethylisatin** and its phenylhydrazone (Heller and Aschkenasi), 1910, A., i, 739.

**Trimethylitamalic acid,** barium salt (Noyes), 1905, A., i, 322.

  methyl ester (Noyes and Doughty), 1906, A., i, 4.

**1:1:3-Trimethyl-4-ketopentamethylene-2:3-dicarboxylic acid.** See 1:1:3-Trimethyl*cyclo*pentan-4-one-2:3-dicarboxylic acid.

**β-Trimethyl-α-lactobetaine,** and its salts and derivatives (Rollett), 1910, A., i, 658.

**Trimethyl-leucylglycine** and its salts (Abderhalden and Kautzsch), 1911, A., i, 528.

**Trimethyl-lophine** and its acetyl derivative (Gattermann), 1906, A., i, 590.

***iso*Trimethylmelamine** (Diels and Gollmann), 1911, A., i, 956.

**Trimethyl-α-methylallylammonium** chloride (Farbenfabriken vorm. F. Bayer & Co.), 1912, A., i, 822.

**Trimethyl α- and β-methylarabinosides** (PURDIE and ROSE), 1906, T., 1207; P., 201.

**2:3:5-Trimethyl-4-methylenebenzo-1:4-pyranol**, 7-hydroxy-, and its salts (BÜLOW and DEIGLMAYR), 1904, A., i, 609.

**3:3:5-Trimethyl-2-methyleneindoline** and its additive salts (KONSCHEGG), 1905, A., i, 924.
acetyl derivative (KONSCHEGG), 1906, A., i, 452.

**3:3:7-Trimethyl-2-methyleneindoline** and its salts (PLANGGER), 1905, A., i, 718.

**1:1:3-Trimethyl-2 methylene-β-naphthindoline** and its iodide (ZANGERLE), 1910, A., i, 431.

**1:3:3-Trimethyl-2-methylene-α-naphthindoline** and its picrate, iodide, ferri- and platini-chlorides (ZANGERLE), 1910, A., i, 430.

**1:3:3-Trimethyl-2-methylene-ββ-naphthindoline** and its iodide (ZANGERLE), 1910, A., i, 431.

**1:1:2-Trimethyl-3-methylene*cyclo*pentane** (BOUVEAULT and BLANC), 1903, A., i, 613.

**Trimethyl α-methylglucoside.** See α-Methylglucoside methyl ethers.

**Trimethyl-γ-methylsulphonepropylammonium** iodide (SCHNEIDER), 1910, A., i, 660.

**1:2:3-Trimethyl-α-naphthiminazolium** iodide (FISCHER and RÖMER), 1906, A., i, 540.

**2:2:4-Trimethylnipecotinic acid** (ISSOGLIO), 1908, A., i, 1010.

**Trimethylnitroaminobenzene**, s-*tri*nitro- (BLANKSMA), 1904, A., i, 566.

**βδθ-Trimethylnonan-ζ-one** and its oxime (BODROUX and TABOURY), 1909, A., i, 699, 767.

**βδθ-Trimethyl-$\Delta^{\delta}$-nonen-ζ-one** and its oxime (BODROUX and TABOURY), 1909, A., i, 699, 767.

**αβζ-Trimethyl-$\Delta^{\epsilon}$-octenoic acid** (*α-methyl-αβ-dihydrogeranic acid*), β-hydroxy-, and its esters (TIFFENEAU), 1908, A., i, 500.

**Trimethyl-*n*-octylammonium** hydroxide (v. BRAUN), 1911, A., i, 612.

**Trimethylolbisacetophenone** (VAN MARLE and TOLLENS), 1903, A., i, 493.

**Trimethyloldiacetylmethyl*cyclo*hexenone** (KNOEVENAGEL), 1903, A., i, 639.

**Trimethylol-2-picoline** and its tribenzoate and their additive salts (LIPP and ZIRNGIBL), 1906, A., i, 381.

**3:4:6-Trimethyl-1:2:5-oxadiazine**, 4-hydroxy-, and its additive salts (DIELS and VAN DER LEEDEN), 1905, A., i, 946.

**Trimethylpapaveroline** and its additive salts (PICTET and KRAMERS), 1903, A., i, 358.

**Trimethylparaconic acid** and its ethyl ester, bromide, chloride, amide, and anhydride (NOYES), 1905, A., i, 322.
derivatives of (NOYES and DOUGHTY), 1906, A., i, 4.

**Trimethylparaconylmalonic acid**, ethyl ester (NOYES), 1905, A., i, 322.

**Trimethylparamide** (MUMM and BERGELL), 1912, A., i, 1015.

**ββγ-Trimethylpentane** (CLARKE and JONES), 1912, A., i, 150.

**ββδ-Trimethylpentane**, αδ-*di*bromo- (MOSSLER), 1904, A., i, 2.

**1:1:2-Trimethyl*cyclo*pentane.** See Dihydro*iso*laurolene.

**Trimethyl*cyclo*pentanecarboxylic acid**, *i*-3-bromo-, and its ethyl ester (PERKIN and THORPE), 1904, T., 144.

**1:1:3-Trimethyl*cyclo*pentane-2:3-dicarboxylic acid** (1:1:3-*trimethylpentamethylene*-2:3-*dicarboxylic acid*) and its anhydride and methyl ester (PERKIN and THORPE), 1906, T., 791.

**1:1:2-Trimethyl*cyclo*pentane-3:4-dione** and its osazone and dioxime (BLANC and THORPE), 1911, T., 2011.

**1:1:2-Trimethyl*cyclo*pentane-3:4-dione-5-(or 2)-carboxylic acid** (BLANC and THORPE), 1911, T., 2011.

**ββγ-Trimethylpentan-γ-ol** (CLARKE and JONES), 1912, A., i, 150.

**ββδ-Trimethylpentan-γ-ol** and its phenylurethane (HALLER and BAUER), 1910, A., i, 220.

**1:2:3-Trimethyl*cyclo*pentanol** (NOYES and KYRIAKIDES), 1910, A., i, 754.

*i-cis*-**Trimethyl*cyclo*pentanolcarboxylic acid** (PERKIN and THORPE), 1904, T., 144.

**1:1:3-Trimethyl-4-*cyclo*pentanol-2:3-dicarboxylic acid** (1:1:3-*trimethyl*-4-*hydroxypentamethylene*-2:3-*dicarboxylic acid*) (PERKIN and THORPE), 1906, T., 789.

**1:1:4-Trimethyl*cyclo*pentan-5-one** and its oxime (BLANC), 1907, A., i, 710, 1058.
and its oxime and semicarbazone (WALLACH and KEMPE), 1904, A., i, 74.

*r*-**4:5:5-Trimethyl*cyclo*pentanone** and its oxime and benzylidene derivative (BLANC and DESFONTAINES), 1903, A., i, 565.

**1:1:3-Trimethyl*cyclo*pentan-4-one-2:3-dicarboxylic acid** (1:1:3-*trimethyl-4-ketopentamethylene-2:3-dicarboxylic acid*), ethyl ester, and its reactions (Perkin and Thorpe), 1906, T., 783.

**1:1:3-Trimethyl-$\Delta^4$-*cyclo*pentene-2:3-dicarboxylic acid**, 4-chloro-, ethyl ester (Perkin and Thorpe), 1906, T., 784.

**2:2:3-Trimethyl-$\Delta^5$-*cyclo*pentene-1:3-dicarboxylic acid** (Komppa), 1910, A., i, 51.

**Trimethylpentenylammonium** iodide (v. Braun), 1911, A., i, 613.

**Trimethylphenonaphthacridines**, synthesis of, and their additive salts (Senier and Austin), 1907, T., 1240; P., 185.

**1-(1:3:5-)Trimethylphenylmethylbenziminazole**, *di*nitrohydroxy- (Meldola and Hay), 1909, T., 1047.

**Trimethylphloroglucinol** and its methyl ether (Herzig and Wenzel), 1903, A., i, 491.

**Trimethylphosphine oxide** and its compounds with acids and salts (Pickard and Kenyon), 1906, T., 264; P., 42.

**ββε-Trimethylpimelic acid**, synthesis of (Blanc), 1906, A., i, 399.

**2:2:4-Trimethylpiperidine** and its additive salts and 5-cyano- (Issoglio), 1908, A., i, 1009.

**2:2:6-Trimethylpiperidone**, 1-nitroso- (*nitrosovinyldiacetoneamine*) (Kohn and Wenzel), 1907, A., i, 237.

**2:2:4-Trimethylpiperidyldimethylammonium** iodide (Issoglio), 1908, A., i, 1009.

**Trimethylplatinic** salts (Pope and Peachey), 1909, T., 571.

**Trimethylplatinimethyl** hydroxide and salts (Pope and Peachey), 1907, P., 86.

**Trimethyl*iso*propenyl*cyclo*pentene** (Perkin and Thorpe), 1906, T., 800.

**Trimethyl-α-propiobetaine** (*α-homobetaine*), optically active (Fischer), 1908, A., i, 80.

**αββ-Trimethylpropionic acid**, bromo-α-hydroxy-, and β-chloro-α-hydroxy-, ethyl esters (Darzens), 1910, A., i, 460.

**ααβTrimethylpropyl** acetate and chloride (Henry), 1907, A., i, 674.

**ααβ-Trimethylpropyl alcohol** and β-chloro- (Henry), 1907, A., i, 670.

**Trimethylpropylammonium** chloride, γ-hydroxy- (*γ-homocholine*), synthesis and derivatives of (Berlin), 1911, A., i, 426, 771.

- chlorides, γ- and β-hydroxy- (α- and *β-homocholine*), hydroxides, and other salts (Malengreau and Lebailly), 1910, A., i, 545.

**1:2:5-Trimethyl-4-*iso*propylbenzene** (Auwers and Köckritz), 1907, A., i, 403.

**1:1:2-Trimethyl-3-*iso*propyl*cyclo*butane** (Lebedeff), 1911, A., i, 775.

**2:6:8-Trimethyl-3-*iso*propyl-1:4-dihydroquinoxaline** and its additive salts (Ekeley), 1905, A., i, 459.

**1:2:2-Trimethyl-4-*iso*propylidene-5-pyrrolidone** (Pauly and Hültenschmidt), 1904, A., i, 88.

**Trimethyl*iso*propyl*cyclo*pentane**, *di*hydroxy- (Perkin and Thorpe), 1906, T., 800.

**2:4:5-Trimethyl-3-propylpyrrole** picrate (Fischer and Bartholomäus), 1912, A., i, 901.

**Trimethylpropylsilicane** (Bygdén), 1911, A. i, 846.

**4:6:6-Trimethyl-2-propyltetrahydro-1:3-oxazine** and its platinichloride and nitroso-derivative (Kohn), 1905, A., i, 929.

**4:4:6-Trimethyl-2-*iso*propyltetrahydro-1:3-oxazine** and its salts and nitroso-derivative (Kohn), 1904, A., i, 933.

**1:2:3-Trimethylpyrazole**, 2:5-imino- (1-*methyliminopyrine*), and its salts (Michaelis and Lachwitz), 1910, A., i, 642.

**1:2:3-Trimethylpyrazolone** and its additive salts (Knorr), 1906, A., i, 893.

**2:4:6-Trimethylpyridine** (*γ-collidine*), and its salts (Grishkewitsch-Trochimowsky), 1911, A., i, 320.

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**2:4:6-Trimethylpyridinium** perchlorate (v. Baeyer and Piccard), 1911, A., i, 901.

**1:2:4-Trimethyl-6-pyridone,** 3-cyano- (v. Meyer and Henning), 1908, A., i, 911.

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**3:4:5-Trimethyl-$\alpha$-pyrone,** 6-hydroxy- (Thole and Thorpe), 1911, T., 2240.

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**$\alpha$:3:4-Trimethylstyrene,** $\beta$-chloro- (Auwers and Köckritz), 1907, A., i, 402.

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**2:5:5-Trimethyltetrahydrofuran** (Losanitsch), 1911, A., i, 804.

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**1:3:6-Triphenyl-1:2- and -1:4-dihydro-1:2:4:5-tetrazines**, 3:6-*di-p*-bromo- (Stollé and Weindel), 1906, A., i, 708.
**1:2:4-Triphenyl-2:5-dihydro-1:2:3-triazole** and its derivatives (Busch and Hefele), 1911, A., i, 583.
**1:2:4-Triphenyl-4:5-dihydro-1:3:4-triazole** (Busch and Ruppenthal), 1911, A., i, 87.
**1:4:5-Triphenyl-4:5-dihydro-1:3:4-triazole**, *endo*imino- and *endo*thio- (Busch, Kamphausen, and Schneider), 1903, A., i, 531.
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**1:2:3-Triphenyl-2-ethyldihydroquinoxaline** (Freund and Richard), 1909, A., i, 418.
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- **Triphenylmethane-4-carboxylic acid,** *ω*-chloro-, methyl ester and acid chloride of (STAUDINGER and CLAR) 1911, A., i, 639.
- **Triphenylmethanecarboxylic acids** (V. LIEBIG), 1908, A., i, 445, 540.
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- **Triphenylmethane-colouring matters**, influence of the position of methyl and nitro-groups relatively to the methane carbon atom on the colours of (Reitzenstein and Runge), 1905, A., i, 300.
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**αββ-Triphenylpropane,** *tri-* and *hexa*-hydroxy- (Lippmann), 1912, A., i, 851.

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**1:3:5-Triphenylpyrazole** (Moureu and Brachin), 1903, A., i, 581.

**1:4:5-Triphenylpyrazole** (Wislicenus and Ruthing), 1911, A., i, 304.

**1:3:4-Triphenylpyrazolone,** 4-*p*-chloro-5-imino-, and its 1-*p*-bromo-derivative (v. Walther and Hirschberg), 1903, A., i, 494.

**2:4:6-Triphenylpyridine,** 3-cyano- (v. Meyer and Irmscher), 1908, A., i, 912.

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**2:4:5-Triphenylpyrimidine,** 6-amino- (Atkinson, Ingham, and Thorpe), 1907, T., 592.

**4:5:6-Triphenyl-2-pyrone** (Ruhemann), 1910, T., 459 ; P., 59.

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**1:2:3-Triphenyl-5-pyrrolidone,** 4-hydroxy- (Borsche), 1909, A., i, 956.

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**Triphenylstibine**, *tri-m*-amino-, and its hydrochloride (Morgan and Micklethwait), 1911, T., 2292; P., 274.

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**3:4:5-Triphenyl-2:3:4:5-tetrahydro-2-oxazolone** (Crowther and McCombie), 1912, P., 315.

**αβγ-Triphenyl-α-thiol-benzyl-** and **-ethyl-propan-γ-ones** (Posner), 1904, A., i, 323.

**2:3:6-Triphenylthiol-quinol** and its diacetyl derivative and **-quinone** (Posner), 1904, A., i, 1030.

**3:4:5-Triphenyl-*o*-**, **-*m*-**, and **-*p*-tolyl-2:3-dihydro-2-glyoxal-ones** and **-thiones** (Brazier and McCombie), 1912, T., 2355.

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**2:4:6-Triphenyl-1:3:5-triazine** (*triphenylcyanidine*), preparation of (Francis and Davis), 1904, T., 260; P. 21.

**2:4:6-Triphenyl-1:3:5-triazine**, 5′-chloro-2′-hydroxy- (Hughes and Titherley), 1912, T., 221; P., 6.

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**1:2:5-Triphenyl-1:3:4-triazole**, 2:5-*di-p*-nitro- (Stollé and Bambach), 1906, A., i, 711.

**1:3:5-Triphenyltriazoles**, chloro-derivatives, synthesis of (v. Walther and Krumbiegel), 1903, A., i, 661.

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*s*-**Tri*iso*propylbenzenesulphonic acid**, magnesium salt (Gustavson), 1905, A., i, 334, 696.

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**Trisaccharides,** hydrolysis of, by dilute acids (Wogrinz), 1903, A., ii, 721.

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**2:4:6-Tris-*α*-naphthaleneazoresorcinol,** and its diacetyl derivative (Orndorff and Ray), 1910, A., i, 597.

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*s*-**Trixanthylbenzene-2:4:6-tricarboxylic acid**, 3:6:9:3′:6′:9′:3″:6″:9″-*nona*hydroxy-, and its dodecabromo- and dodecaiodo-derivatives and their salts (Silberrad and Glover), 1906, T., 1808 ; P., 252.
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- **4-Veratroyloxy-3-methoxybenzoic acid**, methyl ester (Mauthner), 1912, A., i, 267.
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  - reaction and its application to the terpene and camphor series (Tschugaeff), 1905, A., i, 71.
- **Xanthogenamides.** See Thiourethanes.
- **Xanthoma substance**, preparation and chemical properties of the (Pringsheim), 1909, A., ii, 74.
- **Xanthomicrol** and its diacetyl derivative (Power and Salway), 1908, A., ii, 418.
- **Xanthone**, condensation of *p*-dibromobenzene with (Cone and West), 1911, A., i, 805.
  - salts of (Gomberg and Cone), 1910, A., i, 872.
  - *per*chlorate (Hofmann, Metzler, and Lecher), 1910, A., i, 187.
- **Xanthone**, 3-amino-, 3-chloro-, and 3-nitro- (Ullmann and Wagner), 1907, A., i, 847.
  - 1-, 2-, 3-, and 4-aminothio-, and 1-, 2-, 3-, and 4-nitrothio-, and their acetyl derivatives and hydrochloride of the 2-compound (Mayer), 1909, A., i, 825.
  - 3-bromo-, and 3-chloro- (Gomberg and Cone), 1910, A., i, 58.
  - 1-hydroxy- (Ullmann and Panchaud), 1907, A., i, 63.
  - 2-hydroxy-, and its methyl ether (Ullmann and Kipper), 1905, A., i, 596.
  - 4-hydroxy- (Ullmann and Zlokasoff), 1905, A., i, 598.
  - 1:8-*di*hydroxy- (v. Baeyer, Aickelin, Diehl, Hallensleben, and Hess), 1910, A., i, 252.
- **Xanthone**, 2:3-*di*hydroxy-, and its diacetyl derivative (Liebermann and Lindenbaum), 1904, A., i, 765.
  - 2:4-*di*nitro- (Ullmann and Engi), 1909, A., i, 474.
  - thio-, derivatives of (Mayer), 1909, A., i, 823.
- **Xanthones**, formation of, from aryloxybenzoic acids (Ullmann and Kipper), 1905, A., i, 596; (Ullmann and Zlokasoff), 1905, A., i, 597.
  - preparation of (Fosse), 1903, A., i, 510.
  - and allied substances, constitution and colour of (Herzig and Klimosch), 1909, A., i, 732.
- **Xanthone series**, observations in the (Diels and Rosenmund), 1906, A., i, 673.
- **Xanthonedicarboxylic acid** (Liebermann and Zsuffa), 1911, A., i, 388.
- **Xanthone-1:2-(or 2:3-)quinoline**, thio-, and its hydrochloride (Mayer), 1909, A., i, 825.
- **4-Xantho-2-nitrotoluene-5-sulphonic acid**, potassium salt (Fichter, Fröhlich, and Jalon), 1907, A., i, 1031.
- **Xanthonium** compounds and thio- (Bünzly and Decker), 1904, A., i, 912.
  - salts, structure of (Hewitt and Thole), 1910, P., 225.
  - *per*chlorate (Hofmann, Roth, Höbold, and Metzler), 1910, A., i, 819.
- **Xanthophanic acid** (Liebermann and Lindenbaum), 1908, A., i, 548; 1909, A., i, 403.
  - and glaucophanic acid (Liebermann and Truchsäss), 1909, A., i, 405.
  - ethers, constitution and reactions of (Liebermann and Lindenbaum) 1907, A., i, 889.
  - methyl and ethyl esters, and their reactions (Liebermann), 1906, A., i, 556.
- **Xanthophyll**, formula and reactions of (Willstätter and Mieg), 1907, A., i, 865.
- **Xantho-α- and -β-propionic acids** and their salts and esters (Holmberg), 1905, A., i, 324; (Biilmann), 1905, A., i, 626.
- **Xanthopurpurin**, preparation of (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 941.
- **Xanthopurpurin**, *di*chloro- (Mettler), 1912, A., i, 359.
- **Xanthopyrrolecarboxylic acid** and its picrate (Piloty and Dormann), 1912, A., i, 519.

**Xanthosuccinic acid** (Biilmann), 1905, A., i, 626.
**Xanthotoxin** and its derivatives (Priess), 1911, A., ii, 646 (Thoms and Priess), 1912, A., i, 40.
**Xanthoxal-anil** and *p*-**tolil** (Wohl and Freund), 1907, A., i, 585.
  and -*o*- and -*p*-**tolils**, and -*α*-**naphthyl-anil** (Ruhemann), 1906, T., 1244 ; P., 198.
  and the action of alkalis on (Ruhemann), 1906, T., 1847 ; P., 284.
  constitution of (Ruhemann), 1907, A., i, 691.
**Xanthoxalanil**, *mono*- and *di*-thio- (Ruhemann), 1906, P., 324 ; 1907, T., 800 ; P., 115.
**Xanthoxalo-ψ-cumidil**, -*p*-**ethoxyanil**, -*β*-**naphthylanil**, and -*m*-**xylidil** (Ruhemann), 1906, T., 1849 ; P., 284.
**Xanthoxalo-*β*-naphthylanil** and -*m*-**xylidil**, *di*thio- (Ruhemann), 1907, T., 803.
**Xanthoxalo-*p*-tolil**, *mono*- and *di*-thio- (Ruhemann), 1907, T., 802 ; P., 802.
**Xanthoxylene** and its hydrochloride (Semmler and Schossberger), 1911, A., i, 1002.
**Xanthoxylins** from prickly ash bark (Gordin), 1907, A., i, 68.
*α*- and *β*-**Xanthoxylins** (Leprince), 1912, A., ii, 479.
*Xanthoxylum alatum* and *aubertia*, constituents of the essential oil of (Semmler and Schossberger), 1911, A., i, 1002.
*Xanthoxylum aubertia*, oil from (Schimmel & Co.), 1907, A., i, 783.
*Xanthoxylum ochroxylum*, pharmacology of (Leprince), 1912, A., ii, 479.
**Xanthyl**, valency of the oxygen atom in, and its compounds with metallic haloids (Fosse and Lesage), 1906, A., i, 687.
  bromide and chloride (Fosse), 1906, A., i, 975.
  derivatives, new (Silberrad and Roy), 1908, P., 204.
**Xanthyl radicles**, introduction of, into electro-negative molecules (Fosse and Robyn), 1906, A., i, 756.
**Xanthyl-acetanilide**, -**aceto**-*o*-, -*m*-, and -*p*-**toluidides**, and -**aceto**-*α*- and -*β*-**naphthalides** (Fosse and Baillon), 1906, A., i., 976.
**Xanthyl-acetic** and -*iso***valeric acids** (Fosse), 1906, A., i, 691.
**Xanthyl-acetoacetic**, -**benzoylacetic**, -**cyanoacetic**, and -**ethylacetoacetic acids**, ethyl esters (Fosse and Robyn), 1906, A., i, 756.
**Xanthyl-acetonitrile** and -**cyanoacetic acid** (Fosse), 1906, A., i, 975.
**Xanthyl-acetophenone** and -**propanone** (Fosse and Robyn), 1906, A., i, 976.
**Xanthyl-acetyl**- and -**benzoyl-acetones** (Fosse and Robyn), 1906, A., i, 756.
**Xanthylbenzene-2-carboxylactone-4:5-dicarboxylic acid**, 3:6:9-*tri*hydroxy-, and its salts and tetrabromo- and tetraiodo-derivatives (Silberrad and Roy), 1906, T., 1796 ; P.,252.
**Xanthylbenzene-2:4:5-tricarboxylic acid**, 3:6:9-*tri*hydroxy-, and its tetrabromo- and tetraiodo-derivatives, and their salts (Silberrad and Roy), 1906, T., 1797.
*o*-**Xanthylbenzoic acid**, methyl ester (Farbwerke vorm. Meister, Lucius, & Brüning), 1909, A., i, 923.
**Xanthylium**, definition of the term (Decker), 1905, A., i, 667.
**Xanthylmalonic acid** (Fosse), 1906, A., i, 975.
**Xenon**, presence of, in gas from thermal springs (Moureu and Lepape), 1910, A., ii, 136.
  krypton, helium, and neon, percentage of, in the atmosphere (Ramsay), 1908, A., ii, 688.
  new method of preparing (Valentiner and Schmidt), 1905, A., ii, 704.
  monatomicity of (Ramsay), 1912, A., ii, 251.
  spectra of (Baly), 1904, A., ii, 3.
  and krypton, refraction and dispersion of, and their relation to those of helium and argon (C. and M. Cuthbertson), 1909, A., ii, 105.
  dispersion of (C. and M. Cuthbertson), 1910, A., ii, 561.
  critical constants and orthobaric densities of (Patterson, Cripps, and Whytlaw-Gray), 1912, A., ii, 843.
  density of (Moore), 1908, T., 2181 ; P., 272.
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  solubility of, in water (v. Antropoff), 1910, A., ii, 409.
  spectrophotometric estimation of (Moureu and Lepape), 1911, A., ii, 1134.

(o-*Xylene*, $Me : Me = 1:2$ ; m-*xylene*, $Me : Me = 1:3$ ; p-*xylene*, $Me : Me = 1:4$.)

**Xenon**, attempt to estimate the relative amounts of krypton and, in atmospheric air (Ramsay), 1903, A., ii, 476.

**Xenotime** from Brazil (Hussak and Reitinger), 1903, A., ii, 553.
  composition of (Brögger), 1906, A., ii, 37 ; (Tschernik), 1907, A., ii, 363.
  variations of the absorption bands of a crystal of, in a magnetic field (Becquerel), 1906, A., ii, 317.
  correlation between the variations of the absorptive bands of a crystal of, in a magnetic field and the magnetic rotatory polarisation (Becquerel), 1906, A., ii, 421.
  absorption spectra of, and the changes they undergo at the temperatures of liquefaction and solidification of hydrogen (Becquerel and Onnes), 1908, A., ii, 338.

**Xeronic acid** (Küster and Haas), 1906, A., i, 694.

**Xeronic anhydride** (Fichter and Obladen), 1910, A., i, 87.

**Xeronic-*p*-tolil** (Fichter and Obladen), 1910, A., i, 88.

**Xylamine** and its hydriodide (Roux), 1903, A., i, 463.
  salts (Roux), 1904, A., i, 291.

**Xylan**, diastatic hydrolysis of (Seillière), 1906, A., ii, 101.

**Xylene**, action of carbon tetrachloride on, in presence of aluminium chloride (Böeseken), 1905, A., i, 424.
  thiocyanates (Strzelecka), 1909, A., i, 791.

*o*-**Xylene** derivatives (Stallard), 1906, T., 808 ; P., 104 ; (Diepolder), 1909, A., i, 786 ; 1911, A., i, 853 ; (Crossley and Wren), 1911, T., 2341 ; P., 307 ; (Crossley and Morrell), 1911, T., 2345 ; P., 307.
  nitro-derivatives (Crossley and Renouf), 1908, P., 58.
  *tri*nitro-derivatives (Crossley and Renouf), 1908, T., 646.

*o*-**Xylene**, ω-amino- and ω-nitro-, and their salts (Konowaloff), 1905, A., i, 762.
  3-bromo-, and its sulphonation (Stallard), 1906, T., 808 ; P., 104.
  chlorobromo-, chlorobromonitro-, and chloronitro-derivatives, formation of (Crossley), 1904, T., 266 ; P., 21.
  3:5-*di*hydroxy-, and its dibenzoate, keto-bromide, and diazo-compound (Simon), 1904, A., i, 406.

*o*-**Xylene**, 3:5-*di*hydroxy-, and its di- and tri-bromo-derivatives (Simon), 1906, A., i, 961.
  ωω′-*di*iodo- (Knoll & Co.), 1911, A., i, 432.
  3-nitro-, and 3:6-*di*nitro- (Crossley and Wren), 1911, T., 2342 ; P., 307.
  3- and 4-nitro-, 3:4-, 3:6-, 4:5-, 4:6- (or 3:5-)*di*nitro-, 3:4:5-, 3:4:6-*tri*nitro- and preparation of 3:5-*di*chloro-, from 4:6-*di*nitro- (Crossley and Renouf), 1909, T., 202 ; P., 26.
  4-nitro-, action of caustic alkalis and air on (Green, Davies, and Horsfall), 1907, T., 2080.
  4:6-*di*nitro- (Crossley and Morrell), 1911, T., 2349.

*m*-**Xylene**, reaction of, with ethyl diazoacetate (Buchner and Delbrück), 1908, A., i, 87.
  triozonide of (Harries and Weiss), 1906, A., i, 228.

*m*-**Xylene**, 6-bromo- and 6-chloro-2:4:5-*tri*nitro- and 6-iodo-5-nitro- (Blanksma), 1906, A., i, 11.
  ω-*tetra*bromo- (Thiele, Günther, and Leopold), 1906, A., i, 750.
  5-bromo-2:4:6-*tri*nitro- (Blanksma), 1907, A., i, 123.
  ω-*tetra*chloro- (Bielecki), 1908, A., i, 424.
  5-chloro-2:4:6-*tri*nitro- (Jackson and Smith), 1904, A., i, 803.
  4:5-*di*hydroxy- (Diepolder), 1911, A., i, 853.
  4:6-*di*hydroxy-. See Xylorcinol.
  *s*-iodo-, *s*-iodoso-, *s*-iodoxy- and *s*-iodonium compounds, and their salts (Willgerodt and Schmierer), 1905, A., i, 425.
  ωω′-*di*iodo-, and *tetra*iodo- (Knoll & Co.), 1911, A., i, 432.
  *s*-nitro-, nitration of (Blanksma), 1906, A., i, 11.
  2:4- and 4:6-*di*nitro- (Errera and Maltese), 1904, A., i, 307.
  2:5- and 4:5-*di*nitro- (Blanksma), 1909, A., i, 296.
  ω-4- and ω-6-*di*nitro- (Société Chimique des Usines du Rhône), 1912, A., i, 176.
  2-nitro-4-cyano-, and 6-nitro-4-cyano- (Borsche), 1912, A., i, 181.
  2:5:6-*tri*nitro-4-nitroamino- (Blanksma), 1903, A., i, 164.

*p*-**Xylene**, absorption spectrum of, in the ultra-violet (Mies), 1909, A., ii, 776.
  interaction of, with ethyl diazoacetate (Buchner and Schulze), 1911, A., i, 50.

(o-*Xylene*, *Me* : *Me*=1:2 ; m-*xylene*, *Me* : *Me*=1:3 ; p-*xylene*, *Me* : *Me*=1:4.)

*p*-**Xylene**, dinitro-derivatives (Blanksma), 1910, A., i, 661.
  disulphoxide (Knoevenagel and Polack), 1908, A., i, 971.
*p*-**Xylene**, ω-*hexa*bromo- (Thiele and Balhorn), 1904, A., i, 491.
  2-bromo-3:5-*di*nitro-, 5-nitro-2:3-*di*amino-, and 5-nitro-2:3-*di*nitroso- (Fries and Noll), 1912, A., i, 660.
  2-iodo- (Ullmann), 1904, A., i, 726.
  ωω′-*di*iodo- (Knoll & Co.), 1911, A., i, 432.
  ω-nitro-, nitration of (Konowaloff and Sentschikovsky), 1904, A., i, 657.
  ω-*di*nitro-, and its metallic derivatives (Ponzio), 1906, A., i, 735.
    diazobenzene derivative of (Ponzio and Charrier), 1908, A., i, 582.
  2:3:5-*tri*nitro-, and its reactions (Blanksma), 1905, A., i, 426.
  3:5-*di*nitro-2-nitroamino-, and its salts (Zincke and Ellenberger), 1905, A., i, 486.
  *o*-nitronitroso- (Meisenheimer and Patzig), 1906, A., i, 643.
**Xylenes**, heat of combustion of (Richards and Jesse), 1910, A., ii, 269.
  nitrotoluenes and toluidines, freezing mixtures of (Fischer), 1910, A., i, 309.
  action of sulphur on (Aronstein and van Nierop), 1903, A., i, 158, 329.
  *o*- and *p*-, bromo-, action of dilute nitric acid on (Konowaloff), 1904, A., i, 657.
  *m*- and *p*-, trinitro-derivatives, crystallography of (Jaeger), 1906, A., i, 642.
  *o*-, *m*-, and *p*-, absorption spectra of (Mies), 1910, A., ii, 563.
    latent heats of evaporation of (Brown), 1905, T., 267 ; P., 75.
    bromination of (Atkinson and Thorpe), 1907, T., 1695.
    nitration of (Konowaloff), 1905, A., i, 762 ; (Gurewitsch), 1905, A., i, 763.
    bromohydroxy-derivatives, and their acetates and compounds with bases (Auwers, Kipke, Schrenk, and Schröter), 1906, A., i, 262.
    six isomeric tribromo- (Jaeger and Blanksma), 1906, A., i, 9.
    ω-nitro- (Wislicenus and Wren), 1905, A., i, 284.
*m*-**Xylene-aluminium chloride**, additive and fermentative properties of (Gustavson), 1903, A., i, 470, 805.
*p*-**Xyleneazobenzene** and its derivatives (Willgerodt and Lindenberg), 1905, A., i, 551.
*o*-**4-Xyleneazo-*p*-cresol** and its acetate and *O*-acetylhydrazo-derivative (Auwers, Hirt, and v. der Heyden), 1909, A., i, 438.
**4-*m*-Xyleneazo-*p*-cresol** and its ethyl ether (Jacobson and Fabian), 1909, A., i, 854.
*m*-**Xylene-4′-azo-3-cyano- and -3-carboxy-β-naphthol-6-sulphonic acids**, sodium salts (Lange), 1908, A., i, 300.
*m*-**Xyleneazo-ββ-dinaphthylamine** (Fischer and Straus), 1908, A., i, 222.
*m*-**Xyleneazoeugenol**, methyl ether of (Colombano), 1907, A., i, 1091.
**Xyleneazoeugenols**, *as-m*-, and *-p*-, and their acetyl derivatives (Oddo and Puxeddu), 1906, A., i, 992.
*m*-**Xyleneazoglutacononic acid**, ethyl ester, *m*-xylylhydrazone (Henrich, Reichenburg, Nachtigall, Thomas, and Baum), 1910, A., i, 901.
4-*m*-**Xyleneazo-5-hydroxy-3-methyl*iso*oxazole** (Bülow and Hecking), 1911, A., i, 245.
4-*m*-**Xyleneazo-5-hydroxy-3-methylpyrazole** (Bülow and Hecking), 1911, A., i, 405.
*m*-**Xyleneazo-α-hydroxynaphthoic acid** and its sodium salt (Sircar and Watson), 1912, A., i, 1037.
4-*m*-**Xyleneazo-5-hydroxy-1-phenyl-3-methylpyrazole** (Bülow and Hecking), 1911, A., i, 405.
4-*m*-**Xyleneazo-3-methyl-5-pyrazolone** and its 1-benzoyl derivative (Bülow and Schaub), 1908, A., i, 705.
*as-m*-**Xyleneazo-β-naphthol** (v. Niementowski), 1903, A., i, 133.
*m*-**Xyleneazo-orcinol**, 5-bromo- (Orton and Everatt), 1908, T., 1020.
4-*m*-**Xyleneazo-3-phenyl*iso*oxazolone** (Meyer), 1911, A., i, 341.
*m*-**Xylene-4-azoresorcinol**, 5-bromo- (Orton and Everatt), 1908, T., 1019.
*m*-**Xyleneazosalicylic acid** and its sodium salt (Sircar and Watson), 1912, A., i, 1037.
**Xyleneazo-**. See also Xylylazo-.
**Xylenediazonium**, 3:5-*di*chloro-, perbromide and platinichloride, and perchloride and its compounds with dimethylaniline and β-naphthol (Zincke and Ellenberger), 1905, A., i, 486.

(o-*Xylene, Me* : *Me*=1:2 ; m-*xylene, Me* : *Me*=1:3 ; p-*xylene, Me* : *Me*=1:4.)

**Xylenediazonium,** nitro-, and its compound with dimethylaniline, and perbromide (Zincke and Ellenberger), 1905, A., i, 486.

**Xylenedicarboxylic acid,** *di*nitro-, bromide of (Willstätter and Kubli), 1909, A., i, 899.

*p*-**Xylene-2-sulphinic acid,** alkaloidal salts, and their rotatory power (Hilditch), 1908, T., 1621.

**Xylenesulphinic acids,** *o*-, *m*-, and *p*-, preparation of (Knoevenagel and Kenner), 1908, A., i, 971.

*p*-**Xylenesulphinic anhydride,** preparation of (Knoevenagel and Polack), 1908, A., i, 971.

*m*-**Xylene-4-sulphonacetic acid,** amide, nitrile, and thioamide of (Tröger and Hille), 1905, A., i, 336.

*m*-**Xylene-6-sulphonamide,** 4-bromo- (Junghahn), 1903, A., i, 22.

*m*-**Xylene-4-sulphonethenylaminoxime** (Tröger and Volkmer), 1905, A., i, 356.

*m*-**Xylene-4-sulphonic acid,** 6-nitro-, oxidation products of (Karslake and Bond), 1909, A., i, 231.

2:6-*di*nitro-, derivatives of (Karslake and Morgan), 1908, A., i, 410.

*m*-**Xylene-5-sulphonic acid,** 4:6-*di*amino-, and its salts (Junghahn), 1903, A., i, 23.

4-bromo-, and its salts, amide, anilide, and chloride (Junghahn), 1903, A., i, 22.

4-hydroxy-, and its salts (Junghahn), 1903, A., i, 23.

*p*-**Xylene-2-sulphonic acid,** alkaloidal salts, and their rotatory power (Hilditch), 1908, T., 1621.

*m*-**Xylene-4-sulphonyl-*p*-aminobenzeneazo-β-naphthol** (Morgan and Micklethwait), 1905, T., 1308.

**2-*p*-Xylenesulphonyldiphenyliodinium** chloride and platinichloride (Willgerodt and PlockstiES), 1912, A., i, 257.

*m*-**Xylene-4-sulphonyl-*p*-nitroaniline and -*p*-phenylenediamine** and its diazotisation (Morgan and Micklethwait), 1905, T., 1307 ; P., 222.

**Xylenol,** bromo-derivatives of (Crossley and Le Sueur), 1903, T., 127.

*o*-**3-Xylenol,** 4:5-*di*bromo- (Crossley and Smith), 1912, P., 333.

*o*-**4-Xylenol,** 5-amino-, acetates, and acetyl derivatives (Diepolder), 1911, A., i, 853.

5-amino-, and its hydrochloride, and 5-nitro-, and its potassium, and sodium salts (Diepolder), 1909, A., i, 786.

*m*-**2-Xylenol** and its bromo-, bromonitro-, bromonitroso-, nitro-, and nitroso-derivatives, and its methyl ether (Auwers and v. Markovits), 1908, A., i, 629.

oxidation of (Auwers and Markovits), 1905, A., i, 219.

methyl and ethyl ethers (Gattermann), 1908, A., i, 33.

*m*-**4-Xylenol** and its methyl ether, condensations of, with phthalic acid and its derivatives (Bentley, Gardner, and Weizmann), 1907, T., 1634 ; P., 215.

chloroacetyl derivative (Fries and Finck), 1909, A., i, 42.

benzoate (Goldschmiedt), 1907, A., i, 923.

*m*-**4-Xylenol,** 6-amino- (Bamberger and Reber), 1907, A., i, 644.

6-bromo- (Noelting), 1903, A., i, 338.

2:6-*di*bromo-5-nitro- and its acetate and 5-nitro- (Fries and Kann), 1907, A., i, 614.

5-chloro-, preparation of (Orton and King), 1911, T., 1191.

6-nitro-, derivatives of (Maltese), 1907, A., i, 912.

*m*-**5-Xylenol** from dehydracetic acid (Carlinfanti), 1910, A., i, 732.

dialcohol of (Auwers), 1907, A., i, 612.

methyl ether, sulphination of (Smiles and Le Rossignol), 1908, T., 761.

methyl and ethyl ethers (Gattermann), 1908, A., i, 33.

*m*-**5-Xylenol,** *s*-*tri*nitro- (Knecht), 1905, A., i, 53.

and its potassium salt (Knecht and Hibbert), 1904, A., i, 871.

*p*-**Xylenol** ethylene ether and its dialdehyde (Gattermann), 1908, A., i, 35.

methyl and ethyl ethers, action of nitric acid on (Decker and Solonina), 1905, A., i, 198.

diphenylhydrazone of the dialdehyde from (Anselmino), 1903, A., i, 122.

*p*-**Xylenol,** 3:6-*di*bromo-4-amino-, and 3:6-*di*bromo-5-nitro-, and its acetyl derivative (Zincke and Breitweiser), 1911, A., i, 216.

**Xylenols,** coumarins from (Clayton), 1908, T., 2018.

bromo- (Crossley and Smith), 1912, P., 332.

1:2:4- and 1:3:4-, bromo-derivatives and their compounds with bases (Auwers, Kipke, Schrenk, and Schröter), 1906, A., i, 261.

(o-*Xylene*, *Me* : *Me*=1:2 ; m-*xylene*, *Me* : *Me*=1:3 ; p-*xylene*, *Me* : *Me*=1:4.)

**Xylenol-alcohol** (Manasse), 1903, A., i, 28.

*o*- and *m*-**Xylenolcinnamic acids.** See α-3:4- and α-2:4-Dimethylphenoxycinnamic acids.

**Xylenolglycollic acids.** See Dimethylphenoxyacetic acids.

*m*-**5-Xylenolsulphonic acid,** *di*nitro-, potassium salt (Knecht and Hibbert), 1904, A., i, 871.

**Xylenyldimethylcarbamide,** nitro- (Fischer and Hess), 1904, A., i, 196.

**α-*m*-Xylic acid.** See 2:4-Dimethylbenzoic acid.

**Xylidine** telluri-bromides and -chlorides (Gutbier, Flury, and Ewald), 1912, A., i, 689.

*o*-**3-Xylidine,** absorption spectrum of (Purvis), 1910, T., 1552.
  oxalyl derivative (Taussig), 1904, A., i, 663.

*o*-**3-Xylidine,** 4:5-, 4:6-, and 5:6-*di*nitro-, and their acetyl derivatives (Crossley and Morrell), 1911, T., 2349 ; P., 307.

*o*-**4-Xylidine,** 3:5-*di*chloro- (Crossley), 1904, T., 278.
  5-nitro- (Diepolder), 1909, A., i, 786.
  3:4(5:6)-, and 3:5-*di*nitro-, and their acetyl derivatives (Crossley and Morrell), 1911, T., 2350 ; P., 307.

*m*-**Xylidine,** acetyl derivative. See Aceto-*m*-xylidide.

*m*-**2-Xylidine,** absorption spectrum of (Purvis), 1910, T., 1552.

*m*-**4-Xylidine** and its bromo-derivatives and their perbromides and acetyl derivatives (Fries), 1906, A., i, 646.
  and its condensation product with acetaldehyde, absorption spectra of (Purvis), 1910, T., 644 ; P., 56.
  aldol bases from, and their derivatives (Edwards, Garrod, and Jones), 1912, T., 1383 ; P., 163.
  phosphorus compounds (Lemoult), 1904, A., i, 380.
  hydrobromide *per*bromide, bromo- (Fries), 1904, A., i, 571.
  nitrite (Wallach), 1907, A., i, 602.
  hydrogen phosphite (Lemoult), 1906, A., i, 493.

*m*-**4-Xylidine,** 5-chloro- (Orton and King), 1911, T., 1188.
  3:5:6-*tri*chloro- (Mannino and di Donato), 1908, A., i, 826.
  2- and 4-nitro- and their acyl derivatives (Errera and Maltese), 1904, A., i, 307.

*m*-**4-Xylidine,** 6-nitro-, preparation and methylation of (Morgan and Micklethwait), 1907, T., 363.
  oxidation of (Errera and Maltese), 1906, A., i, 84.
  2:6-*di*nitro- and its benzoyl derivative (Maltese), 1909, A., i, 466.

*m*-**5-Xylidine,** preparation of (Willgerodt and Schmierer), 1905, A., i, 425.

*p*-**Xylidine,** derivatives of (Schultz and Peteny), 1907, A., i, 1075.

**Xylidines,** action of dichloroacetic acid on (Heller and Leyden), 1908, A., i, 218.
  isomeric, *di*- and *tri*-bromo-derivatives (Jaeger and Blanksma), 1906, A., i, 10.
  *o*-3-, *o*-4-, and *p*-, diazoamino compounds from (Vignon and Simonet), 1905, A., i, 397.

*m*-**4-Xylidine-5-sulphonic acid** and **6-**nitro- and their salts (Junghahn), 1903, A., i, 22.

*m*-**4-Xylidine-6-sulphonic acid,** diazotised, action of bleaching powder on (Maué), 1904, A., i, 458.

*p*-**Xylidinesulphonic acid,** nitro-, and its reactions (Blanksma), 1905, A., i, 426.

**Xylidinesulphonic acids,** preparation of (Junghahn), 1903, A., i, 473.

*m*-**Xylidinoacetonitrile** (Knoevenagel and Klucke), 1904, A., i, 989.

**3-*as*-*m*-Xylidino-5:7-dimethyloxindole** and its bromo-derivative and **3′:5′-Xylidino-4:6-dimethyloxindole** (Heller and Leyden), 1908, A., i, 218.

**7-*m*-Xylidino-10-*m*-xylylsafranol** (Heller), 1912, A., i, 917.

*m*-**4-Xylidylcamphoformeneaminecarboxylic acid** and its *m*-4-xylidine salt (Tingle and Bates), 1911, A., i, 55.

**Xylitone,** synthesis of an isomeride of (Knoevenagel and Schwartz), 1906, A., i, 963.
  Pinner's, and its derivatives (Knoevenagel and Beer), 1906, A., i, 965.

*iso***Xylitones,** α- and β-, and their semicarbazones (Knoevenagel and Blach), 1906, A., i, 964.

**Xyloidins** (Jentgen), 1912, A., i, 416.

**1:3-Xylo-4:5-methylenequinone** and its polymeride and 2:6-*di*bromo- (Fries and Kann), 1907, A., i, 613.

*m*-**Xylonitrile,** 2-nitro- (Kalle & Co.), 1912, A., i, 126.

(o-*Xylene*, *Me* : *Me*=1:2 ; m-*xylene*, *Me* : *Me*=1:3 ; p-*xylene*, *Me* : *Me*=1:4.)

*m*-**Xyloquinol**, ketonic, and its ethyl ether, transformations of (Bamberger), 1907, A., i, 516, 517, 521; (Bamberger and Frei), 1907, A., i, 519.
 2-methyl and 2-ethyl ethers and 4-chloroimino- and 4-imino- (Bamberger), 1907, A., i, 518.

*p*-**Xyloquinol** and its ethers (Bamberger), 1907, A., i, 516, 518, 521 ; (Bamberger and Frei), 1907, A., i, 519 ; (Bamberger and Brun), 1907, A., i, 520.
 formation of, from *m*-xylylhydroxylamine (Bamberger), 1903, A., i, 84.

*p*-**Xyloquinol**, *di*bromo-, diacetate of (Zincke and Breitwieser), 1911, A., i, 216.
 3:5:6-*tri*bromo- (Zincke and Breitweiser), 1911, A., i, 216.

*m*-**Xylo-ψ-quinol** and imino- (Bamberger), 1903, A., i, 83.

*o*-**3:4-Xyloquinone**, 3-phenylhydrazone of (Diepolder), 1909, A., i, 787.

*o*-**4:5-Xyloquinone** (Diepolder), 1909, A., i, 787.

*p*-**Xyloquinone**, action of magnesium methyl iodide on (Bamberger and Blangey), 1911, A., i, 883.
 β-lactone of (Staudinger and Bereza), 1911, A., i, 461.

*p*-**Xyloquinone**, *di*hydroxy- (Fichter and Willmann), 1904, A., i, 678.
 diacetate of (Fichter and Weiss), 1908, A., i, 659.

**Xylorcinol** and its dibenzoyl and bromo-derivatives (Luther), 1907, A., i, 128.
 ethyl ether, transformations of (Bamberger), 1907, A., i, 521.
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 ketonic, action of phenylhydrazine on (Bamberger and Reber), 1907, A., i, 643.

**Xylose** derivatives, synthesis of (Ryan and Ebrill), 1908, A., i, 716.
 estimation of (Herzog and Hörth), 1909, A., ii, 625.

*l*-**Xylose**, formation of, from *d*-glycuronic acid (Salkowski and Neuberg), 1903, A., i, 7 ; (Küster), 1903, A., i, 402.

**Xylosediphenylhydrazone** (Tollens and Maurenbrecher), 1905, A., i, 262.

**Xylose-β-naphthylhydrazone** (Hilger and Rothenfusser), 1903, A., ii, 187.

**Xylose-*o*-nitrophenylhydrazone** (Reclaire), 1909, A., i, 421.

**Xylose-*m*-nitrophenylhydrazone** (Reclaire), 1908, A., i, 1014.

**Xylosephenylmethylhydrazone** and its melting point (Müther and Tollens), 1904, A., i, 224.

*m*-**Xyloylacrylic acid** (Kózniewski and Marchlewski), 1906, A., i, 759.

**2-*m*-Xyloylbenzoic acid**, 5′-amino-, and 5′-chloro- (Badische Anilin- & Soda-Fabrik), 1911, A., i, 885.

**3-(*m*-4)-Xyloylpicolinic acid** (Halla), 1911, A., i, 1021.

**Xylyl** bromides, magnesium derivatives of (Carré), 1909, A., i, 544.

*o*-**Xylyl** dichloro-orthophosphate, *tri*chloro- (Anschütz and Schroeder), 1906, A., i, 506.
 ethyl ether (v. Braun), 1910, A., i, 479.

*m*-**Xylyl** dichloro-orthophosphate, *tri*chloro- (Anschütz, Schroeder, Weber, and Anspach), 1906, A., i, 506.
 ethyl and ethylene ethers, bromo-derivatives of (Stoermer and Göhl), 1903, A., i, 848.
 methyl ether and its tribromo- and trinitro-derivatives (Blanksma), 1903, A., i, 164.

*p*-**Xylyl** sulphide (Martynowicz), 1911, A., i, 196.

*o*- and *p*-**Xylyl** ethers (Zeltner and Tarassoff), 1910, A., i, 316 ; (Pawlowsky), 1911, A., i, 442.
 iodide (Pawlowsky), 1911, A., i, 442.
 *di*sulphide (Strzelecka), 1911, A., i, 196.

*m*-**Xylylacetic acid**, transformation of pinonic acid into, and methyl ester (Barbier and Grignard), 1909, A., i, 301.

*s*-**Xylylacetic acid**, ethyl ester (Carré), 1910, A., i, 620.

**5-Xylylacridines**, *m*- and *p*-, and their picrates (Schmid and Decker), 1906, A., i, 306.

**Xylylaldehyde** and its derivatives (Savariau), 1908, A., i, 189.

(o-*Xylene*, *Me* : *Me*=1:2 ; m-*xylene*, *Me* : *Me*=1:3 ; p-*xylene*, *Me* : *Me*=1:4.)

**Xylylaldoximes** (Scholl and Kačer), 1903, A., i, 254.

*m*-**Xylylallylsulphone** and its dichloride (Tröger and Hille), 1903, A., i, 807.

**4-*m*-Xylylaminobenzoic acid**, 2-amino- and 2-nitro- (Delétra and Ullmann), 1904, A., i, 271.

*m*-**4-Xylylaminosuccino-2:4-dimethylphenylimide** and nitroso- (Warren and Grose), 1912, A., i, 961.

*o*-**4-**, *m*-**4-**, and *p*-**5-Xylylammonium** osmichloride (Gutbier and Walbinger), 1911, A., i, 191.
  platinibromide (Gutbier, Bauriedel, and Obermaier), 1911, A., i, 33.

*as*-*m*-**Xylylaniline**, *o*-hydroxy-, and its *N*-acetyl derivative (Anselmino), 1908, A., i, 259.

**2:4-Xylylanthranilic acid** (Ullmann and Bader), 1907, A., i, 843.

*m*-**Xylyl-5-arsinic acid**, 4-amino- (Benda), 1910, A., i, 148.

*p*-**Xylyl-5-arsinic acid**, 2-amino- (Farbwerke vorm. Meister, Lucius, & Brüning), 1910, A., i, 532.

**3:4-*m*-Xylylaziminobenzoic acid** (Delétra and Ullmann), 1904, A., i, 271.

*m*-**Xylylazoacetoacetic acid**, ethyl ester, and its benzoylhydrazone (Bülow and Schaub), 1908, A., i, 705.

*as*-*m*-**Xylylazoformaldoxime** (Busch and Wolbring), 1905, A., i, 494.

*p*-**Xylyl-2-azoimide**, 3:5-*di*nitro- (Fries and Noll), 1912, A., i, 660.

**Xylylazo-**. See also Xyleneazo-.

*p*-**Xylylbenzylidenehydrazine** (Willgerodt and Lindenberg), 1905, A., i, 550.

*o*-, *m*-, and *p*-**Xylyl** *α*-**bromopropyl ketones** (Kunckell), 1912, A., i, 432.

*m*-**Xylylbromopropylsulphone** (Tröger and Hille) 1903 A., i, 807.

*o*-, *m*-, and *p*-*α*-**Xylyl-$\Delta^{\alpha}$-butylenes**, and their dibromides and *α*-chloro-*β*-bromo- (Kunckell), 1912, A., i, 432.

**Xylyl butyl ketones**, *m*- and *p*-, and their oximes and semicarbazones (Layraud), 1906, A., i, 433.

*m*-**Xylylcarbamide**, action of nitrous acid on (Haager and Doht), 1906, A., i, 577.

*m*-**Xylyl-4-carbimide** (Haager and Doht), 1906, A., i, 577.

*p*-**Xylyl*tri*chloromethylcarbinol** and its acetate and benzoate (Dinesmann), 1905, A., i, 645.

**Xylyldesoxyn** and its oxidation (Nastukoff), 1907, A., i, 413.

**Xylyldiazobisacetoximes**, *m*- and *p*- (Bresler, Friedemann, and Mai), 1906, A., i, 321.

*α*-*o*-, *m*-, and *p*-**Xylyl-*αα*-dimethylacetophenones** (Haller and Bauer), 1911, A., i, 726.

*o*- and *m*-**Xylyldimethylethylamines** (Haller and Bauer), 1911, A., i, 726.

*o*-, *m*-, and *p*-**Xylyldimethylethylcarbinols** (Haller and Bauer), 1911, A., i, 726.

**4-*m*-Xylyldioxatriazine-5-carboxylic acid**, ethyl ester (Jovitschitsch), 1907, A., i, 99.

*o*-**Xylylene** bromide, syntheses with (Scholtz and Wolfrum), 1910, A., i, 771.
  cyanide, syntheses with (Hinsberg), 1910, A., i, 486.
    condensation of ethyl oxalate with (Wislicenus and Penndorf), 1910, A., i, 560.
  oxide (Willstätter and Veraguth), 1907, A., i, 303.

*m*-**Xylylene**, derivatives of (Autenrieth and Beuttel), 1910, A., i, 61.
  bromide, action of, on primary, secondary, and tertiary amines, and on potassium cyanate and thiocyanate (Halfpaap), 1903, A., i, 578.

*p*-**Xylylene**, derivatives of (Autenrieth and Beuttel), 1910, A., i, 61.
  cyanide, condensation of ethyl oxalate with (Wislicenus and Penndorf), 1910, A., i, 560.
  glycol, monoethyl ether of (Autenrieth and Beuttel), 1910, A., i, 60.

**5-*m*-Xylyleneazo-1-*m*-xylyl-6-pyridazone-3-carboxylic acid** (Henrich, Reichenburg, Nachtigall, Thomas, and Baum), 1910, A., i, 901.

*o*-**Xylyleneconhydrinium** salts (Scholtz), 1911, A., i, 327.

**Xylylenediamine**, hydroxy-derivatives, *N*-acyl derivatives of (Einhorn, Bischkopff, Szelinski, Schupp, Ladisch, and Mauermayer), 1906, A., i, 247.

*m*-**Xylylene-4:6-diamine**, monoacyl derivatives, action of nitrous acid on (Morgan, Micklethwait, and Couzens), 1906, T., 1295 ; P., 240.

**Xylylenediaminecarboxylic acid**, *o*-hydroxy-, *N*-dichloroacetyl derivative of (Einhorn and Mauermayer), 1906, A., i, 251.

*o*-**Xylylenedi*iso*amylammonium** bromide and iodide (Scholtz and Wolfrum), 1910, A., i, 773.

(o-*Xylene*, *Me* : *Me*=1:2 ; m-*xylene*, *Me* : *Me*=1:3 ; p-*xylene*, *Me* : *Me*=1:4.)

*o*-**Xylylenedi*iso*amyldiamine** (Scholtz and Wolfrum), 1910, A., i, 773.

*m*-**Xylylene-dianiline** and -*o*- and -*p*-ditoluidines, *tri*bromo-, *p*-hydroxy-, acetyl derivatives of (Auwers and Bondy), 1904, A., i, 1052.

**Xylylenedianilines**, *o*- and *m*-, *tri*bromohydroxy-, *O*- and *N*-monoacetyl derivatives of (Auwers, Anselmino, and Richter), 1904, A., i, 738.

*m*-**Xylylenedianthranilic acid** and its salts (Halfpaap), 1903, A., i, 578.

**Xylylenediketohydrindene** and its dioxime, phenylhydrazones, and polymeride (Fecht), 1907, A., i, 906.

*m*-**Xylylene-4:5-dimethyldiamine** and its derivatives (Fischer and Römer), 1906, A., i, 540.

*m*-**Xylylene-4:6-dimethyldiamine**, preparation of, and the action of diazo-compounds on, and its dinitrosoamine (Morgan and Clayton), 1906, T., 1055 ; P., 174.

*m*-**Xylylene-*as*-dimethyl-4:6-*di*amine** and the action of diazonium salts on, and its benzenesulphonyl, benzoyl, and azo-*β*-naphthol derivatives (Morgan and Micklethwait), 1907, T., 365 ; P., 28.

**Xylylenediphthalimide**, hydroxy- (Tscherniac), 1903, A., i, 490.

*o*-**Xylylenedipropylammonium** bromide (Scholtz and Wolfrum), 1910, A., i, 773.

*o*-**Xylylenedipyridinium** ferrichloride (Scholtz), 1910, A., i, 97.

*m*-**Xylylenediurethane** (Halfpaap), 1903, A., i, 579.

**Xylylenefluorene** (Fecht), 1907, A., i, 906.

*m*-**Xylylenemethyl-4:6-diamine** and the action of diazonium salts on (Morgan and Micklethwait), 1907, T., 363 ; P., 28.

**Xylylenepentamethylenexylylenediamine** (Scholtz and Wolfrum), 1910, A., i, 773.

*o*-**Xylylenestilbazolinium** salts (Scholtz), 1911, A., i, 327.

*o*-**Xylylenesulphone** (Autenrieth and Brüning), 1903, A., i, 273.

*o*-**Xylylenetetrahydroquinolonium** bromide, iodide and picrate of (Scholtz and Wolfrum), 1910, A., i, 773.

*m*-**Xylylenetrimethyl-4:6-diamine**, and the action of diazonium salts on, and its nitrosoamine and benzenesulphonyl derivative (Morgan and Micklethwait), 1907, T., 366 ; P., 28.

*o*-**Xylylene-*m*- and -*p*-xylylenedipiperidinium salts** (Scholtz), 1911, A., i, 327.

*m*-**Xylylene-*p*-xylylenedipiperidinium** salts (Scholtz), 1911, A., i, 326.

*a*-**Xylylethyl alcohol**, *ββ*β-*tri*chloro- (Savariau), 1908, A., i, 188.

*s*-**Xylylethyl alcohol** and its acetate and phenylurethane (Carré), 1910, A., i, 620.

**2-*m*-4-Xylyl-3-ethyl*iso*indolinone**, 3-hydroxy- (Kuhara and Komatsu), 1911, A., i, 207.

*m*-**Xylylglycinyl ethyl urethane** (Frerichs and Breustedt), 1903, A., i, 18.

*β*-*m*-**Xylylhydantoin** (Frerichs and Breustedt), 1903, A., i, 18.

*o*-**4-Xylylhydrazine** and its hydrochloride (Padoa and Graziani), 1910, A., i, 510.

*m*-**5-Xylylhydrazine** hydrochloride (Padoa and Graziani), 1910, A., i, 778.

*p*-**Xylylhydrazine** and its additive salts (Plancher and Caravaggi), 1905, A., i, 298 ; (Willgerodt and Lindenberg), 1905, A., i, 550.

4-*m*-**Xylylhydrazinoacetic acids**, *s*- and *as*- (Busch and Meussdörffer), 1907, A., i, 348.

*m*-**Xylylhydrazonecyanoacetic acid**, ethyl ester, and amide and acetyl derivatives (Weissbach), 1903, A., i, 542.

*as*-*m*-**Xylylhydroxylamine**, transformations of (Bamberger), 1903, A., i, 84 ; 1907, A., i, 516, 517, 518.

*m*-**Xylylindigotin**, bromo-derivatives (Badische Anilin- & Soda-Fabrik), 1904, A., i, 1020.

*o*- and *m*-4- and *p*-**2-Xylylmethylallylcarbinols** (Matschurevitsch), 1911, A., i, 961.

*o*-**Xylylmethylaniline** (v. Braun), 1910, A., i, 506.

*p*-**Xylylmethylcarbinol** (2-*ethylol*-1:4-*dimethylbenzene*) (Klages and Keil), 1903, A., i, 554.

**2-*m*-4-Xylyl-3-methyl*iso*indolinone**, 3-hydroxy- (Kuhara and Komatsu), 1911, A., i, 207.

**3:5-Xylylmethylnitroamine**, 4-bromo-2:6-*di*nitro- and 6-bromo-2:4-*di*nitro- (Blanksma), 1906, A., i, 11.

**1-Xylyl-2-methylpyrrolidone-2-carboxylic acids**, *o*-, *m*-, and *p*-, and their esters, amides, aminoximes, and nitriles (Kühling and Falk), 1905 A., i, 372.

(o-*Xylene*, *Me* : *Me*=1:2 ; m-*xylene*, *Me* : *Me*=1:3 ; p-*xylene*, *Me* : *Me*=1:4.)

*m*-**Xylylnaphthylamine** (Knoll & Co.), 1912, A., i, 345.

*v*-*m*-**Xylylnitrosoamine**, *N*-acetyl derivative, and its compound with α-naphthol (Jacobson and Huber), 1908, A., i, 299.

*m*-*p*-**Xylyloxybenzoic acid** (Ullmann and Zlokasoff), 1905, A., i, 598.

*m*-**Xylyl phenoxymethyl ketone** and its oxime and **sulphonic acid** (Stoermer and Atenstädt), 1903, A., i, 41.

*o*-**3**-, *m*-**4**-, and *p*-**Xylylphthalamides** (Kuhara and Komatsu), 1911, A., i, 207.

*as*- and *s*-*o*-**3**-, *m*-**4**-, and *p*-**Xylylphthalimides** (Kuhara and Komatsu), 1911, A., i, 207.

β-*m*-**Xylylpropionic acid** (Gattermann), 1906, A., i, 591.

α-**Xylylpropionic acids**, 2:4-, 2:5-, and 3:4-, α-amino-, and their nitriles, hydrochlorides of (Jaweloff), 1906, A., i, 427.

**3**-(*m*:**4**)-**Xylyl pyridyl ketone** and its picrate (Halla), 1911, A., i, 1021.

**3**-*m*-**Xylylrhodanic acid** and its condensation with aldehydes (Andreasch and Zipser), 1905, A., i, 931.

**Xylylsulphon-**. See Xylenesulphon-.

*p*-**Xylylsulphone** (Martynowicz), 1911, A., i, 196.

*p*-**Xylylsulphoxide** (Martynowicz), 1911, A., i, 196.

*o*-**Xylyltartronic acid**, methyl and ethyl esters (Guyot and Esteva), 1909, A., i, 237.

*m*-**Xylyl***di***thiobiuret** and *m*-**Xylylthiouret** hydriodide (Fromm and Schneider), 1906, A., i, 657.

*m*-**Xylylthiohydantoic acid** (Johnson), 1903, A., i, 581.

*m*-**Xylyl**-ψ-**thiohydantoin** and its acetyl derivative (Johnson), 1903, A., i, 581.

*m*-**Xylyl-5-thiolacetic acid** (Kalle & Co.), 1912, A., i, 453.

*p*-**Xylyl-2-thiolacetic acid**, 4-chloro- (Kalle & Co.), 1912, A., i, 770.

*m*-4-**Xylylthiosulphonic acid**, *p*-phenylenediamine salt (Tröger and Volkmer), 1905, A., i, 89.

*m*-**Xylyl**-*p*-**toluidine**, *o*-amino-. See *m*-Methylbenzyl-*p*-toluidine, 6-amino-.

## Y.

**Yam.** See *Dioscorea batatas.*

**Yangonin**, **Yangonic acid** and its acetyl derivative, and **Yangonol** and its benzoyl derivative (Winzheimer), 1908, A., i, 805.

**Yeast** (van Hest), 1904, A., ii, 278.
- from the cane sugar of Nicaragua (Pozzi-Escot), 1904, A., ii, 580.
- some constituents of (Hinsberg and Roos), 1904, A., ii, 760.
- chemistry of (Sedelmayr), 1903, A., ii, 745.
- biology of (Herzog), 1903, A., ii, 504.
- influence of nutrition on the diastase formation of (Saito), 1910, A., ii, 644.
- development of, in sugar solutions without fermentation (Iwanowski), 1903, A., ii, 319, 386.
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- influence of temperature on the rate of development of (Herzog), 1906, A., ii, 115.
- influence of humus on the development of (Dzierzbicki), 1909, A., ii, 751.
- surface tension of the plasma membranes of (Kisch), 1912, A., ii, 588.
- permeability of cells of (Paine), 1912, A., ii, 77.
- influence of acids and alkalis on the autolysis of (Navassart), 1911, A., ii, 141.
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- fermentation with (v. Euler and Lundeqvist), 1911, A., ii, 640.
- chemical dynamics of alcoholic fermentation by (Slator), 1906, T., 128.
- fermentation, sugar-free (Neuberg and Hildesheimer), 1911, A., ii, 320; (Neuberg and Tir), 1911, A., ii, 520; (Neuberg and Karczag), 1911, A., ii, 1019, 1020.
- influence of salts on the auto-fermentation of (Harden and Paine), 1911, P., 103.
- action of dissolved substances on the auto-fermentation of (Harden and Paine), 1912, A., ii, 284.
- fermentation of galactose by (Harden and Norris), 1910, A., ii, 989.
- influence of arsenic compounds on the fermentation of sugars by (Harden and Young), 1911, A., ii, 519.
- degradation of amino-acids in fermentation by (Neubauer and Fromherz), 1911, A., ii, 201.
- relations of oxygen, and of movement of the nutrient solution to the increase and fermentative activity of (Nathan and Fuchs), 1906, A., ii, 697.

**Yeast**, influence of the chemical constitution of the nitrogenous food material on the fermenting power of (Pringsheim), 1907, A., ii, 44.
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toxic action of various substances on (Bokorny), 1906, A., ii, 480.
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**Yeast**, action of, on tartaric acid (Karczag), 1912, A., ii, 973.
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